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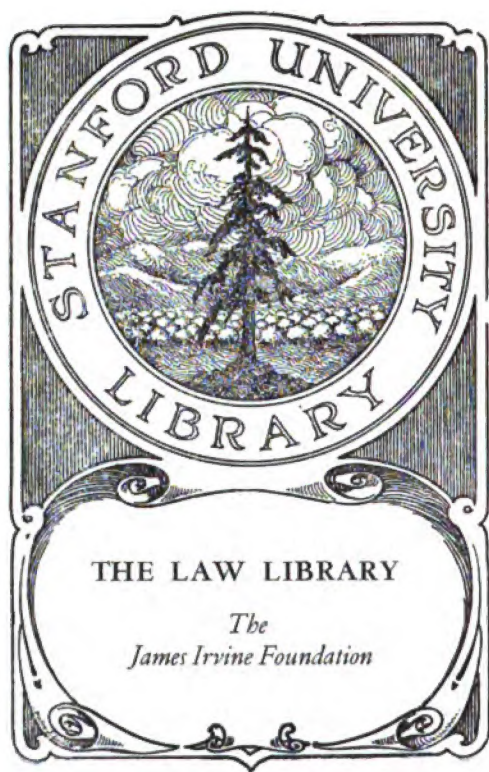
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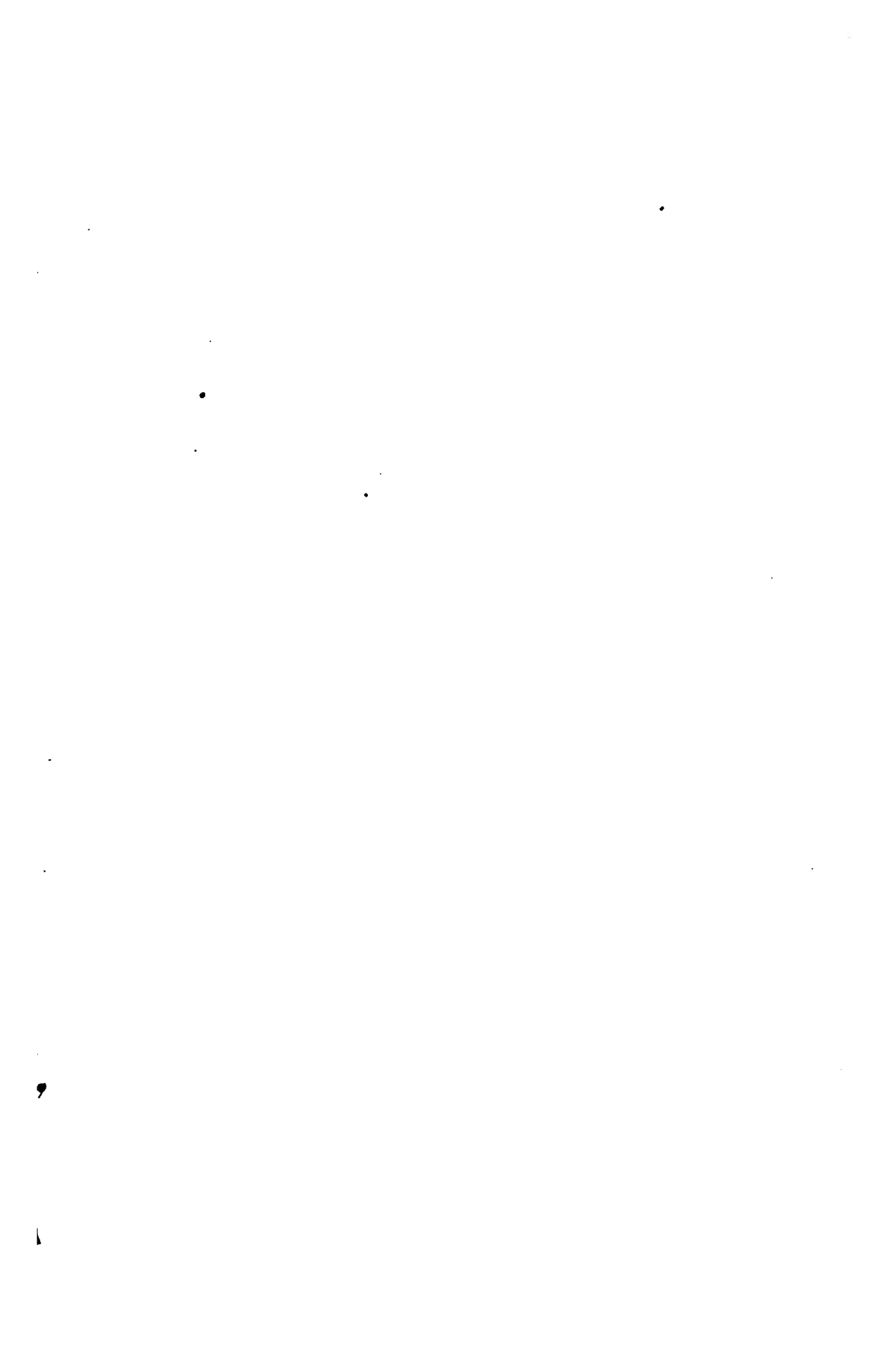
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Circuit Court of the United States.

DISTRICT OF RHODE ISLAND.

HORACE H. DAY

vs.

ISAAC HARTSHORN, ET AL.

TRIAL AT LAW WITH A JURY.

NOVEMBER TERM, 1854.

N. RICHARDSON, T. A. JENCKES, AND RICHARD W. GREENE,

For Plaintiff.

JAMES T. BRADY, CHARLES S. BRADLEY, SAMUEL AMES,
ABRAHAM PAYNE, AND JOSEPH S. PITMAN,

For Defendant.

NEW YORK:

JOHN F. TROW, PRINTER, 49 ANN STREET.

1855.



U. S. CIRCUIT COURT.

RHODE ISLAND DISTRICT.

HORACE H. DAY,

vs.

ISAAC HARTSHORN, et al.

In Law.

Be it remembered, that on the third day of November, A. D. 1853, the following Writ and Declaration were filed of record in the Clerk's Office of said Court.

RHODE ISLAND DISTRICT, SO.

THE PRESIDENT OF THE UNITED STATES OF AMERICA.

To the Marshal of said District, or to his Deputy—Greeting :

We command you to summon Isaac Hartshorn and Daniel Hayward, of the city and county of Providence, State of Rhode Island, sc., and both citizens of said State of Rhode Island, and Nathaniel Hayward of Colchester, in the State of Connecticut, a citizen of the State of Connecticut, co-partners transacting business at said Providence, under the firm of Hartshorn & Company, if they may be found in your District, to answer the complaint of Horace H. Day, of the city, county and State of New York, and a citizen of the State of New York, at the next Circuit Court, to be holden at Providence, within and for the Rhode Island District, on the fifteenth day of November next ensuing the date hereof, in an action of the case for that certain letters patent duly issued in the name of the United States of America, according to the acts of Congress in such case made and provided, dated the 31st day of August, 1836, were granted to Edwin M. Chaffee, a citizen of the United States, for a new and useful improvement in the application of undissolved caoutchouc to cloths, leather and other articles, in coloring the same without the aid of a solvent, and in the machinery used in the process, which letters patent were duly extended by the Commissioner of Patents, under the acts of Congress on the 30th day of August, 1850, for a further term of seven years from the 31st day of August, 1850, and the said Edwin M. Chaffee on the first day of July, A. D. 1853, duly sold and assigned to said plaintiff the said letters patent for the United States of America, by deed of assignment thereof, duly recorded in the Patent office; and the said defendants, not ignorant of the premises, but continuing to injure the plaintiff in that behalf, and wrongfully to deprive him of the benefit of said patent right, after the assignment of said letters patent as aforesaid, and since the fourteenth day of July last, have made and used, and vended to others to be used, the invention aforesaid, so made and secured by letters patent as aforesaid, and have, to the date of the plaintiff's writ, continued so as aforesaid to make and use, and vend to others to be used, the

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said invention and improvement so patented and secured as aforesaid, and have infringed the patent right so secured by said letters patent, and belonging to said plaintiff, contrary to the Statute in such cases made and provided, and other wrongs to the plaintiff have done and committed, as by the declaration to be filed in Court will be fully set forth, to the damage of the plaintiff five thousand dollars. Hereof fail not, and make true return of this Writ, with your doings thereon. Witness, the Hon. ROGER B. TANEY, our Chief Justice, at said Providence, this 24th day of October, Anno Domini 1853.

JOHN T. PITMAN, *Clerk.*

UNITED STATES OF AMERICA.

Rhode Island District, So., October 26th, 1853.

Made service of the within writ by leaving true and attested copies hereof at the last and usual places of abode of Isaac Hartshorn and Daniel Hayward; the within named Nathaniel Hayward was not to be found by me within my District.

CIRCUIT COURT OF THE UNITED STATES,

RHODE ISLAND DISTRICT, SO.

HORACE H. DAY

vs.

ISAAC HARTSHORN, *et al.*

November Term, A. D. 1853.

Horace H. Day, of the city, county and State of New York, and a citizen of the State of New York, complains of Isaac Hartshorn and Daniel Hayward, of the city and county of Providence, and State of Rhode Island, so., and both citizens of said State of Rhode Island (Nathaniel Hayward, of Colchester, in the State of Connecticut, a citizen of said State of Connecticut, being named as defendant in said Plaintiff's writ, but not summoned), copartners, transacting business at said Providence, under the firm of Hartshorn & Company, duly summoned by the Marshal, in an action of the case. For that Edwin M. Chaffee, a citizen of the United States, was the original and first inventor and discoverer of a new and useful improvement, in the application of undissolved caoutchouc to cloth, leather and other articles, in coloring the same without the aid of a solvent, and in the machinery used in the process, as set forth in the letters patent hereinafter mentioned and described, the same being a new and useful improvement, and not known or used before his said invention and discovery, and not at the time of his application for a patent therefor, as hereinafter mentioned, in public use, or on sale with his consent or allowance, and the said Chaffee being so as aforesaid, the original and first inventor thereof, made application in due form of law, to the Commissioner of Patents for the United States, for a patent for said improvements, and paid thereon the patent fee of thirty dollars, and presented a model specification and drawings, describing his aforesaid invention and improvements, and such proceedings were had thereon that letters patent were granted unto said Chaffee, under seal of the Patent Office of the United States, signed by the Secretary of State, and countersigned by the Commissioner of Patents of the United States aforesaid, dated the thirty-first day of August, A. D. 1836, whereby the exclusive right and liberty to make, use and vend to others, to be used within the United States aforesaid, the said improvements and invention were secured to him, the said Chaffee, his heirs, administrators and assigns, for the term of fourteen years next after the date of said letters patent; as will appear by said letters patent, ready to be produced in Court, and which are of the following import, and to the following effect, viz:—

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THE UNITED STATES OF AMERICA!

To all to whom these Letters Patent shall come:

WHEREAS, Edwin M. Chaffee has alleged that he has invented a new and useful Improvement in the application of undissolved caoutchouc to cloths, leather and other articles, in coloring the same without the aid of a solvent, and in the machinery used in the process, which he states has not been known or used before his application; has made oath that he is a Citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said Improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the TREASURY OF THE UNITED STATES the sum of thirty dollars, and presented a petition to the COMMISSIONER OF PATENTS, signifying a desire of obtaining an exclusive property in the said Improvement, and praying that a patent may be granted for that purpose.

THESE ARE THEREFORE to grant, according to law, to the said Edwin M. Chaffee, his heirs, administrators or assigns, for the term of fourteen years from the thirty-first day of August, one thousand eight hundred and thirty-six, the full and exclusive right and liberty of making, constructing, using and vending to others to be used, the said Improvement, a description whereof is given in the words of the said Edwin M. Chaffee, in the schedule hereunto annexed, and is made part of these presents.

IN TESTIMONY WHEREOF, I have caused these Letters to be made Patent, and the seal of the PATENT OFFICE has been hereunto affixed.

[L. s.]

GIVEN under my hand at the CITY OF WASHINGTON, this thirty-first day of August, in the year of our Lord one thousand eight hundred and thirty-six, and of the INDEPENDENCE of the United States of America the sixty-first.

JOHN FORSYTH,
Secretary of State.

*Countersigned and sealed with the
Seal of the Patent Office.* }

HENRY L. ELLSWORTH,
Commissioner of Patents.

THE SCHEDULE REFERRED TO IN THESE LETTERS PATENT, AND
MAKING PART OF THE SAME.

To all to whom these Presents shall come:

I, Edwin M. Chaffee, of Roxbury, in the county of Norfolk, and commonwealth of Massachusetts, send greeting.

BE IT KNOWN, That I, the said Edwin M. Chaffee, have invented, made and applied to use a new and useful improvement in the preparing, coloring and applying India Rubber to cloth of all kinds, leather and other articles, without the use of a solvent, which I call "Chaffee's Improvement in Rubber," specified in the words and figures following, and exhibited in the drawings annexed. The India Rubber undergoes an operation, preparatory to its being applied to the cloth and other articles, and the following is a description of that part of the machinery and apparatus employed for the purpose: A hollow cylinder, or roller, six feet long and twenty-seven inches in diameter, heated by steam or otherwise to about two hundred degrees of Fahrenheit, is surmounted by another cylinder of like length, and heated in like manner, and eighteen inches in diameter. The large and small cylinders come in contact with each other on one side at about ten inches distant from the top of the large one. The large cylinder revolves much faster than the small one, so that there is a compound rolling and slipping action between the cylinders. Five bars are placed on the top of the large cylinder side by side each other, leaving a space

of about three-fourths of an inch between them. The bars are one and a half inch thick, twelve inches wide and about six feet long. The edges which lie in contact with the cylinder, are convex or circular, and so constructed that when one corner of the edge touches it, the other recedes from it, thus leaving a wedge-like space for the Rubber to enter between the bars. What I mean by the corner of the edge is the angles formed by the two sides of the bars and their circular edges, the one being an acute and the other an obtuse angle, which are more or less acute or obtuse according to their situation on the cylinder—the said bars being substitutes for so many cylinders—but are better for sifting the coloring between them; they are held in contact with the cylinder, or nearly so, by weights or screws arranged for the purpose. If the Rubber is to be colored, the coloring matter, in fine powder, should be sifted or otherwise put into the spaces between the bars, where it will be incorporated with the Rubber as it passes between the bars and the cylinder. A revolving apron is attached to the machine which carries the Rubber between the two cylinders, or a plank may be substituted, if placed nearly in contact with the under side of the small cylinder, and the Rubber put on in contact with the cylinder.

The operation of the foregoing apparatus is as follows: The Rubber is first cut into pieces about two inches square, and from one-eighth to one-fourth of an inch thick; it is then spread upon the apron that conveys it to the cylinder, where the compound rolling and slipping action of the heated cylinders, softens and tears the Rubber into fine threads or thin sheets, which at the same time mixes with the coloring which is sifted into the spaces between the bars; thus it passes all the bars successively, and undergoes this operation several times before it goes from the preparing and coloring part of the machine, to the coating or covering part of the machine.

The coating or covering part of the machine, or apparatus for applying the prepared Rubber to the cloth and other articles, consists of four hollow cylinders, six feet long, heated by steam or otherwise, to about two hundred degrees of Fahrenheit, placed one above the other. For conveniently describing their operation, I number them 1, 2, 3 and 4, beginning at the bottom. No 1 is eighteen inches in diameter; Nos. 2 and 3 are each one foot in diameter, and No. 4 is eighteen inches in diameter; No 3 moves much slower than the others, thus creating a compound rolling and slipping action between the surfaces of No. 2 and No. 3, and also between No 3 and No. 4; sometimes the three first cylinders only are used, in which case the gearing for driving the 4th cylinder is disengaged, and the cloth or other article to be coated, is made to pass into the covering machine between the 2d and 3d cylinders, thence it passes half round the 2d and 1st cylinders, the Rubber side coming in contact with the first and passing nearly round it, whence it is taken off and rolled up. The prepared rubber is conveyed by hand or otherwise from the preparing part of the machine whilst warm, and put into the hopper, which is placed between the second and third cylinders to receive it. The hopper is about two inches narrower than the cloth or other article intended to be coated. The cloth enters between the bottom and 2d cylinder, whilst the rubber enters between the bottom and 3d cylinder, when the coating of the cloth is effected. There is advantage in passing the rubber between the 3d and 4th cylinders in the coating part of the machine before it comes in contact with the cloth, which warms and softens it, so that it will adhere better to the cloth, to which, also, the rubber is presented more uniformly than when promiscuously put into the hopper. I sometimes put the prepared rubber directly upon the cloth or other article to be covered between the 2d and 3d cylinders, and then disengage the gearing of the 3d cylinder, which will not then revolve. The bottom of the hopper in this case does not enter so far between the cylinders. The sides of the hopper must in all cases enter as far as possible without being pinched by the cylinders, to which they must be well fitted. Another mode of using this machine is as follows: The rubber alone enters between the 2d and 3d cylinders, where it is formed into a sheet which passes half round the 2d, the cloth entering at the same time between the 2d and 1st, where the sheet of rubber is transferred from the cylinder to the cloth, then passing nearly round the first cylinder,

where it is taken off and rolled up as before. In coloring I sometimes make the rubber into sheets, apply the coloring and roll the same into a mass, and then pass it through the cylinders, repeating until sufficiently colored. Again, I mix the coloring with small pieces of rubber and let them both go between the cylinders, or cylinder and bars together—mix more and repeat until sufficiently colored, when it goes between a bar and cylinder, or between two cylinders, one going faster than the other—the rubber comes through in fine particles so long as the coloring is added. The machine is an entire one, although in the drawings herewith, for the purpose of exhibiting more distinctly the several parts and operations, it is divided into sections—Nos. 1 and 2, and Nos. 3 and 4. Figure 1 is the coating part of the machine, and a perspective view of it exhibited in the drawing annexed.

A A A A A, is a cast iron frame or housing for the rollers or cylinders. B is a brace connecting the two parts of the frame together. C C are two timbers upon which the frame stands. 2, 3 and 4 are the cylinders. No. 1 cylinder is behind the frame of bars D. D D D D are five bars, called cheeks, through which the cloth passes before it enters the rolls. E is a roll upon which the cloth is wound before being coated. F is a check weight attached to a cord passing over roll E. G G are screws regulating the pressure of the rolls 1, 2, 3 and 4. H is a cog-wheel that drives cylinder No. 1. I is a cog-wheel attached to the cylinder No. 4, and is driven by the wheel H. K is a cog-wheel attached to cylinder No. 3. L is a cog-wheel upon the roll No. 1. M is a pinion matching with K and L, and serves to give the proper direction to the wheel K, L being the driving wheel. N is a pulley attached to the roll or shaft O, seen in the sectional view. The shaft having a pinion upon its other end which drives the cog-wheel H.

At R is seen the cloth passing between the cylinders 2 and 3. At S is seen a sheet of India Rubber which comes in contact with the cloth whilst passing between the cylinders 2 and 3. P in the sectional view is a roller driven by the short belt from the shaft O. Q is a small roll upon which the cloth is wound when it leaves the cylinder No. 1. It is made to revolve by resting on the rolls O and P—the surface of O and P revolve a little faster than the cylinder No. 1. At T the cloth is seen leaving No. 1 cylinder. Between the cog-wheel H and the frame A is a cog-wheel upon the cylinder No. 1, and also one upon the cylinder No. 2—the wheels being the same size of the cylinders to which they respectively belong. That upon No. 1 drives the one upon No. 2, and consequently the cylinder No. 2, Fig. 2, is a sectional view, the letters on which refer to the same parts as those on No. 1. U is a hopper, not seen in the perspective, into which the prepared Rubber is put by hand or otherwise, while hot, as it comes from the preparing apparatus. When three rolls only are used, the hopper is put upon the opposite side of the cylinders, between No. 2 and 3. Fig. 3 is a perspective view of the preparing part of the machine A A A. A A A is a frame of cast iron. B B B B are timbers upon which the frame rests. C is a large cylinder 6 feet long and 27 inches in diameter. D is a cylinder 6 feet long and 18 inches diameter. E is a shaft 6 inches in diameter. M is a pinion upon the shaft E, which drives the cog-wheel K and consequently the cylinder O. K is a cog-wheel upon the cylinder O. L is a pulley upon the shaft E, which is the first power. N is a cog-wheel upon the cylinder O, which drives the cog-wheel O upon the cylinder D. G G are screws regulating the pressure of the cylinders. F E are five bars of iron seen more distinctly in the sectional view. They are one foot wide, 1 3-4 inches thick, and about seven feet long. H H are two blocks of iron, having holes in them corresponding to the end of the bars F, into which the bars are put and fastened by keys. I I are screws regulating the pressure of the bars upon the cylinder O. S is an apron or endless belt, which carries the rubber to be prepared, between the two cylinders C and D (the same is more distinctly seen in the sectional view.) P Q are rolls around which the apron revolves (the apparatus for propelling the rolls P Q is not represented.) At R, in the sectional view, is seen the prepared rubber as it leaves the last bar and shrinks up into a mass. Fig. 4 is a sectional view, the letters of which refer to the same parts as those of Fig. 3.

What I claim as new in my invention is the preparation and application of India Rubber to all kinds of cloths, leathers and other like substances, without the use of a solvent, in the manner aforesaid. I also claim the mixing of coloring with India Rubber, without bringing it into a state of solution, in manner above described. And I further claim the uses of the heated cylinders with the rolling and slipping action thereof, as applicable to India Rubber in the manner aforesaid, thereby preserving the strength of the Rubber, and at the same time applying it to, and covering cloths, leathers and like substances, with greater facility, and at less expense than by any other process heretofore known or used.

EDWIN M. CHAFFEE.

HORATIO BASS, }
D. A. SIMMONS, } Witnesses.

And the plaintiff further saith that, before the expiration of the original term for which said letters patent were granted, to wit, on the 30th day of August, A. D. 1850, upon the petition of said Chaffee, made in due form of law, according to the acts of Congress in such cases made and provided, the Commissioner of Patents granted to the said Chaffee an extension of said letters patent for the further term of seven years, from the 31st day of August, A. D. 1851, as will appear by said extension of said letters patent ready to be produced in Court, and which is of the following import, and to the following effect, viz :

WHEREAS, upon the petition of Edwin M. Chaffee for an extension of the within Patent, granted to him on the thirty-first day of August, eighteen hundred and thirty-six, the undersigned Commissioner of Patents in accordance with the 18th section of the Act of Congress, approved the 4th of July, 1836, entitled "An Act to promote the progress of the useful arts and to repeal all acts heretofore made for that purpose," and the act approved the 27th of May, 1848, entitled "An Act to provide additional Examiners in the Patent Office, and for other purposes," did, on the thirtieth day of August, eighteen hundred and fifty, certify that said Patent *ought to be extended*.

NOW THEREFORE, I, Thomas Ewbank, Commissioner of Patents, by virtue of the power vested in me by said Acts of Congress, do renew and extend said patent, and certify that the same is hereby extended for the term of seven years from and after the expiration of the first term, viz.: the thirty-first day of August, eighteen hundred and fifty, which certificate on the Petition of the Applicant, together with this Certificate, having been duly entered of record in the Patent Office, the said Patent has now the same effect as though the same had been originally granted for the term of twenty-one years.

IN TESTIMONY WHEREOF, I have caused the seal of the Patent Office to be hereunto affixed, this thirtieth day of August, one thousand eight [L. s.] hundred and fifty, and of the Independence of the United States the seventy-fifth.

THOMAS EWANK,
Commissioner of Patents.

Whereby the exclusive right and privilege to make, use and vend to others to be used, said invention and improvement were secured to the said Chaffee, his heirs, administrators, and assigns, for the term of seven years next after the expiration of the original term for which said letters patent were granted :

And the plaintiff further saith, that the said Chaffee afterwards, to wit, on the first day of July, A. D. 1858, for a valuable consideration therein expressed, to him paid by the said plaintiff, sold and assigned to the said plaintiff, his heirs, administrators and assigns, all his said Chaffee's right, title, and interest in and to said letters patent so extended as aforesaid, and to said improvements and invention, by his deed of assignment thereof, duly executed and recorded in the patent office of the United States aforesaid, according to the Statutes in such case made and provided, whereby all the rights and privileges which were se-

cured to the said Edwin M. Chaffee, his heirs, administrators and assigns, by said letters patent, and the extension thereof as aforesaid, accrued to the said plaintiff, his heirs, administrators and assigns, as will by said assignment to be produced in Court appear.

And the plaintiff further saith that the defendants, well knowing the premises, but contriving and intending to injure the said plaintiff in that behalf, and wrongfully to deprive him of the benefit of said patent right, so secured to the said plaintiff by the assignment of said letters patent from said Chaffee as aforesaid, heretofore, to wit, at said Providence, within said District of Rhode Island, on the fourteenth day of July, A. D. 1853, and on divers days since that time, and until the commencement of this suit, have used and continued to use said improvements, and have, by the use of said improvements, prepared and applied large quantities of India rubber; to wit, two hundred and fifty tons, to all kinds of cloths, leathers and other like substances, without the use of a solvent, according to the plan and directions contained in said letters patent, and the process therein described; and also have prepared large quantities of India rubber, to wit, two hundred and fifty tons, by mixing coloring with the same without bringing it into a state of solution in manner as described in said letters patent; and also have prepared large quantities of India rubber, to wit, two hundred and fifty tons, and wrought the same into articles of merchandise according to the plan and process described in said letters patent, and the same have sold, whereby the said plaintiff has been greatly injured and deprived of great profits and advantages which he might, and otherwise would have derived from said invention and letters patent so secured to him as aforesaid, and has sustained actual damage to the amount of Five Thousand Dollars, and by force of the statute aforesaid, an action hath accrued to the plaintiff to recover of the defendants said actual damage and such additional amount, not exceeding in the whole three times the amount of such actual damage as the Court may see fit to order and adjudge.

Yet the said defendants, though often requested, have refused and still do refuse to pay such sum or any part thereof.

To the Plaintiff's damage Five Thousand Dollars as laid in his writ, dated the 24th day of October, A. D. 1853.

Wherefore he sues by his Attorney,

T. A. JENCKES.

And at the November Term, 1853, of said Court, the case was called, and the Plaintiff moved that the Defendants file their pleas, and that an order be granted for a Rule to issue to them for that purpose—when upon agreement of parties it was ordered that the pleas be filed on the first of June next—and the cause was continued.

And at the June Term, A. D. 1854, on the first day thereof, after disposing of sundry motions filed in the case, it was ordered that the Pleas filed on the fifth of June be received, and cause to stand as if pleas were filed on the first of June—said pleas are as follows:—

CIRCUIT COURT OF THE UNITED STATES.

RHODE ISLAND DISTRICT, SS.

HORACE H. DAY.

vs.

ISAAC HARTSHORN, *et al.*

And the said Defendants come and defend the wrong and injury when, &c., and say they are not guilty of the said supposed grievances in Plaintiff's declaration laid to their charge, or any or either of them, or any part thereof in the man-

ner and form, as the said Plaintiff hath in said declaration thereof complained against them, and of this the said Defendants put themselves upon the country, &c.

By their Attorneys,

S. AMES, C. S. BRADLEY and J. S. PITMAN.

And the Defendants, in addition to the matters already put in issue under said above plea, give notice to the Plaintiff, that they shall produce at the trial the declarations of the Plaintiff, and put in proof the acts of said Plaintiff, before, during, and since the application at the Patent Office for the extension of the Patent originally granted to E. M. Chaffee, in 1886, and particularly referred to in the Plaintiff's declaration, and also the testimony adduced before the Commissioners of Patents on the hearing for said extension, by or through said Plaintiff, and other declarations and acts of said Plaintiff since the extension of the said Patent, at the Patent Office and elsewhere.

SECOND PLEA.

And for a further plea in this behalf the said defendants, by leave of the Court here for this purpose, first had and obtained according to the form of the Statute in such case made and provided, say that the said Plaintiff ought not to have or maintain his aforesaid action thereof against them, because they say that before the said alleged assignment of the said Letters Patent by said Edwin M. Chaffee, to the said Plaintiff, to wit, on the twenty-third day of May, in the year one thousand eight hundred and fifty, to wit, at New York, in the Southern District of New York, the said Edwin M. Chaffee made and entered into an agreement in writing, sealed with the seal of him the said Edwin M. Chaffee, and now shown to the said Court here, the date whereof is the day and year last aforesaid, and of which a counterpart executed by said Goodyear, was at the execution thereof delivered to said Chaffee, which said agreement in writing is to the purport and effect following, that is to say:—

This agreement made by and between Edwin M. Chaffee and Charles Goodyear, witnesseth, that the said Chaffee, for, and in consideration of the sum of three thousand dollars, to be paid to him, as hereinafter specified, hath sold, assigned and set over, and by these presents, doth hereby assign and transfer all his right, title and interest in and to the improvement or invention of compounding and mixing gum lac or shellac, with India rubber, either with or without sulphur or other ingredients, and heat.

And the said Chaffee further agrees to apply either with or in behalf of said Goodyear, for patents in the United States, for said invention, at the expense of said Goodyear; said Chaffee further agrees that the said Goodyear may proceed to take out patents in all foreign countries, for his said Goodyear's benefit, said Goodyear paying the expenses of the same for said improvements in shellac, and said Chaffee agreeing to execute the necessary papers therefor.

The said Goodyear on his part agrees to pay to the said Chaffee, the sum of three thousand dollars, upon the following terms, viz: one half of the aforesaid sum of fifteen hundred dollars, at the time of the issuing of a patent for said improvement in the United States, or if a patent should be previously granted as a renewal of his said Chaffee's patent, for India Rubber Machinery, then the aforesaid sum of fifteen hundred dollars shall be paid to the said Chaffee upon the assignment of said patent, for said machinery, to said Goodyear, the remaining one half of said three thousand dollars to be paid within one year from the date hereof.

In the event of neither of the aforesaid patents being obtained, then the first named sum of fifteen hundred dollars is also to be paid within one year from the date hereof. The said Chaffee, upon his part agrees further, that upon the issuing of one or both of the aforesaid patents, for shellac and machinery, he will immediately assign the same to the said Goodyear.

And it is further mutually agreed, that if at that time the aforesaid three thousand dollars shall not have been paid, the said Goodyear shall make such a lien, transfer or conveyance, of his right, title and interest, in said patent to

said Chaffee as shall prevent any valid transfer of any rights or interests in said patents, by the said Goodyear, until the said three thousand dollars shall be paid by the said Goodyear.

It is further understood that said Chaffee may reserve to himself the right to use the said India rubber machinery in any business which he may hereafter carry on; and it is further understood, that if the said patent for India rubber machinery is not extended, then the whole sum of three thousand dollars, shall be paid *for*, or secured *upon* the patent and improvement for shellac.

In witness whereof we have hereunto set our hands and seals, this 23d day of May, A. D. 1850.

EDWIN M. CHAFFEE, [L. s.]
CHARLES GOODYEAR, [L. s.]

Witness, JAMES A. DORR.

As by the said agreement in writing may more certainly appear, and the said defendants further, in fact, say that the said patent in the said declaration mentioned, and said Chaffee's patent for India Rubber Machinery, mentioned in the said agreement in writing set forth in this plea, are one and the same patent; and that the renewal and extension of the said patent in the said declaration mentioned is the same renewal of his said Chaffee's Patent for India rubber machinery mentioned, contemplated and intended in and by the said agreement in writing set forth in this plea; and the said defendants further in fact say, that before and at the time of the extension of said patent of said Chaffee, and at all times after such extension, and to the time of the commencement of this suit, they, the said defendants, with the license and permission of said Goodyear, used the said improvements of said Chaffee, for which he obtained his said patent, which was so extended as in the said declaration mentioned, and that they used, with the like license and permission of said Goodyear, the machines mentioned in the plaintiff's declaration, at the time and to the manner and extent stated and complained of in the said declaration, as they lawfully might for the cause aforesaid; and this the said defendants are ready to verify. Wherefore they pray judgment if the said plaintiff ought to have or maintain his aforesaid action thereof against them, &c.

THIRD PLEA.

And for a further plea in this behalf, by leave of the Court here for that purpose first had and obtained, according to the form of the Statute in such case made and provided, the said defendants say, that the said plaintiff ought not to have or maintain his aforesaid action against them, because they say that before the said alleged assignment of the said letters patent by the said Edwin M. Chaffee to the said plaintiff, to wit, on the twenty-third day of May, in the year one thousand eight hundred and fifty, to wit, at New York, in the Southern District of New York, the said Edwin M. Chaffee made and entered into an agreement in writing with one Charles Goodyear, sealed with the seal of him the said Edwin M. Chaffee, and now shown to the said Court here, the date whereof is the day and year last aforesaid, a counterpart of which, executed by said Goodyear, was at the date last aforesaid delivered to said Chaffee, and which last mentioned agreement in writing was to the purport and effect following, that it to say:

This agreement made by and between Edwin M. Chaffee and Charles Goodyear, witnesseth that the said Chaffee, for, in and in consideration of the sum of three thousand dollars, to be paid to him as hereinafter specified, hath sold, assigned and set over, and by these presents, doth hereby assign and transfer all his right, title and interest in and to the improvement or invention of compounding and mixing gum lac or shellac, with India rubber, either with or without sulphur or other ingredients, and heat.

And the said Chaffee further agrees to apply either with or in behalf of said Goodyear, for patents in the United States, for said invention, at the expense of said Goodyear; said Chaffee further agrees that the said Goodyear may proceed to take out patents in all foreign countries, for his said Goodyear's benefit,

said Goodyear paying the expenses of the same for said improvements in shellac, and said Chaffee agreeing to execute the necessary papers therefor.

The said Goodyear on his part agrees to pay to the said Chaffee, the sum of three thousand dollars, upon the following terms, viz.: one half of the aforesaid sum of fifteen hundred dollars, at the time of the issuing of a patent for said improvements in the United States, or if a patent should be previously granted as a renewal of his said Chaffee's patent, for India rubber machinery, then the aforesaid sum of fifteen hundred dollars shall be paid to the said Chaffee upon the assignment of said patent, for said machinery, to said Goodyear, the remaining one half of said three thousand dollars, to be paid within one year from the date hereof.

In the event of neither of the aforesaid patents being obtained, then the first named sum of fifteen hundred dollars is also to be paid within one year from the date hereof. The said Chaffee, upon his part agrees further, that upon the issuing of one or both of the aforesaid patents, for shellac and machinery, he will immediately assign them to the said Goodyear.

And it is further mutually agreed, that if at that time the aforesaid three thousand dollars shall not have been paid, the said Goodyear shall make such a lien, transfer or conveyance of his right, title and interest in said patent to said Chaffee, as shall prevent any valid transfer of any rights or interests in said patents by the said Goodyear, until the said three thousand dollars shall be paid by the said Goodyear.

It is further understood, that said Chaffee may reserve to himself the right to use the said India rubber machinery in any business which he may hereafter carry on; and it is further understood, that if the said patent for India rubber machinery is not extended, then the whole sum of three thousand dollars shall be paid *for*, or secured *upon* the patent and improvement for shellac.

In witness whereof we have hereunto set our hands and seals, this 28d day of May, A. D. 1850.

EDWIN M. CHAFFEE, [L. S.]
CHARLES GOODYEAR, [L. S.]

Witness,
JAMES A. DOOR.

As by the said last mentioned agreement in writing, may more certainly appear, and the said defendants further in fact say, that before the said alleged assignment to the said plaintiff, that is to say, on the fifth day of September, in the year one thousand eight hundred and fifty, to wit, at the place aforesaid, the said Edwin M. Chaffee made and entered into a certain other agreement in writing, with one William Judson, sealed with the seal of him the said Edwin M. Chaffee, and now shown to the said Court here, the date whereof is the day and year last aforesaid, and a counterpart of which agreement, executed by said Judson, was at the date last aforesaid delivered to said Chaffee, which last mentioned agreement in writing, is to the purport and effect following, that is to say:

Whereas, I, EDWIN M. CHAFFEE, have lately procured an extension of my patent, dated August 31, 1836, for seven years from the expiration thereof, the expenses of which have been large, by reason of the opposition thereto—but which expenses have not yet been ascertained, and cannot be at present;

And whereas, said patent, at the time it was extended, stood in the name of Charles Goodyear, and was held for his benefit, and the benefit of those who had a license, or who had a right to use his Metallic or Vulcanized India Rubber, or India Rubber prepared and cured according to and under his patent, dated June 15, 1844, and re-issued December 15, 1849;

And whereas, said Charles Goodyear agreed with me, for himself and others using my said patent under him, that they would be at the expense of applying for said extension of said patent, and make me an allowance for the use thereof, in case the same should be extended, at and after the rate of twelve hundred dollars per annum, to commence on the 31st of August, 1850, and payable quar-

terly, that is to say, three hundred dollars on the 1st days of December, March, June and September, in each and every year during the present or any further extension of said patent, and during any re-issue of the same, and until said patent or any re-issue thereof shall be set aside as void in the highest Court to which the same can be carried;

And whereas, Wm. Judson, Esq., has had the management of said application for said extension, and has paid and become liable to pay the expenses thereof, and agreed to guarantee me the payment of said sums of money, according to the terms, and at the times above specified:

Now I do hereby, in consideration of the premises, and to place my patent so that in case of my death or other accident or event, it may enure to the benefit of said Charles Goodyear and those who hold a right to the use of said patent, under and in connection with his licensees, according to the understanding of the parties interested—*Nominata, constitute and appoint* said Wm. Judson, my trustee and attorney irrevocable, to hold said patent and have the control thereof, so that no one shall have a license to use said patent or invention, or the improvements secured thereby, other than those who had a right to use the same when said patent was extended, without the written consent of said Judson first had and obtained.

And said Judson, for himself and those interested, agrees with me said Chaffee, my executors, administrators, and assigns, that the expenses of extending said patent shall all be paid without charge to me; and further, that I shall be paid said sums of money, at the times and according to the terms above recited; and said Judson, and those for whom he acts, are to be at all the expense of sustaining and defending said patent, without any charge to me. And it is further expressly understood and agreed, that I am to have the right to use said patent and improvement in any business which I may carry on.

As witness my hand and seal, this fifth of September, 1850.

EDWIN M. CHAFFEE, [L. s.]

Witness,
GEO. WOODMAN.

As by the said last mentioned agreement in writing may more certainly appear, which said last mentioned agreement in writing afterwards, and before the said alleged assignment to the said plaintiff, to wit, on the eleventh day of September, in the year one thousand eight hundred and fifty, was duly recorded in the patent office, and the said defendants further in fact say, that afterwards and before the said alleged assignment to the said plaintiff, that is to say, on the twelfth day of November, in the year one thousand eight hundred and fifty-one, the said Edwin M. Chaffee made and entered into a certain other agreement in writing, with the said William Judson, sealed with the seal of him the said Edwin M. Chaffee, and now shown to the said Court here, the date whereof is the day and year last aforesaid, a counterpart of which agreement executed by said Judson, was at the date last aforesaid delivered to said Chaffee, which said last mentioned agreement in writing, is to the purport and effect following, that is to say:

Whereas, it was agreed by and between William Judson and E. M. Chaffee, by an article under hand and seal, and dated the fifth day of September, 1850, which agreement was recorded at the patent office, September 11th, 1850, on what terms said Chaffee would continue to hold said patent for the benefit of said Judson and Charles Goodyear, and his licensees;

And whereas, in said agreement there was an omission to state, that if said licensees continued to use the improvements in said patent named, they should each one contribute and pay said Judson his proportion of the expenses and services expended in obtaining the renewal of said patent, which it was intended that said licensees should pay under said Judson, in case they continued the

use of the said improvement for which said patent was issued, after the extension thereof;

And whereas, there was no such direct, absolute stipulation, on the part of said Judson, to pay said Chaffee the sum of fifteen hundred dollars per annum, in quarterly payments, on the usual quarter days, as said Chaffee claimed, and now insists shall be inserted in said agreement;

And whereas, it is now agreed by said Chaffee and said Judson, that said agreement shall be so modified as to secure the objects more fully intended to be secured by said agreement;

Now it is agreed, that said licensees shall each pay his share of the services and expenses, to said Judson, as the condition on which they shall have the license of said Judson to use said improvements; and that on the payment of his or their share or proportion of the services and expenses aforesaid, said Judson shall be authorized to give each a license to use said improvement, on their paying as aforesaid, severally, each for himself, or his firm or company. And said agreement is further so altered, that said Judson hereby agrees to pay said Chaffee, fifteen hundred dollars, in quarterly payments each year, on the usual and customary quarter days, on the time set forth in the agreement aforesaid, to which this is an addition and alteration, commencing the quarterly payments on the first day of March next. And I agree with said Judson that he may use my name in the commencement and prosecution of all suits he may have occasion to commence to sustain said patent, or recover damages for any infringement or infringements thereof or for any other purposes in relation to the same, or the use thereof, he holding me harmless from any costs by reason thereof, and he to have all the benefits which may be derived from such suits.

*Sealed and delivered this 12th day of }
November, 1851, in the presence of }*

WILLIAM JUDSON, [L. S.]

"The word February erased, and the word March, inserted before execution."

EDWIN M. CHAFFEE, [L. S.]

BENJ. H. JARVIS.

As by the said last mentioned agreement may more certainly appear, which last mentioned agreement in writing, afterwards and before the alleged assignment to the said plaintiff, to wit, on the twenty-seventh day of November, in the year one thousand eight hundred and fifty-one, was duly recorded in the Patent Office. And the said defendants further in fact say, that the said patent in the said declaration mentioned, and his said Chaffee's patent for India Rubber Machinery mentioned in the said agreement in writing in this plea first set forth, and the patent mentioned in the said agreement in writing in this plea secondly above set forth, and the said patent in the said agreement in writing in this plea thirdly above set forth are one and the same patent, and further that the renewal and extension of the same patent, in the said declaration mentioned, and the renewal of his said Chaffee's Patent for India Rubber Machinery mentioned, intended and contemplated in and by the said agreement in writing first above in this plea set forth, and the extension of said patent mentioned in the said agreement in writing in this plea secondly above set forth, and the said renewal of said patent mentioned in the said agreement in writing, thirdly above in this plea set forth, are one and the same extension, and renewal, and the said defendants further in fact say, that before and at the time of the said extension of said Chaffee's patent in the said declaration mentioned, and at all times ever since such extension they the said defendants, by virtue of the license and permission of the said Charles Goodyear, had and now have, according to the true intent and meaning of the said agreement in writing, bearing date the fifth day of September, one thousand eight hundred and fifty, a right to use his said Charles Goodyear's Metallic or Vulcanized India Rubber, or India Rubber prepared and cured, according to and under his said Goodyear's patent in the same last mentioned agreement, and the said defendants further in fact say, that at the said several times when, &c., in the said declaration mentioned, they these defendants used the said machines in the said declarations

mentioned, containing the said improvements and invention therein also mentioned, by and with the license and permission of the said Charles Goodyear, and by and with the license and permission of the said William Judson, as, he, the said defendants lawfully might for the cause aforesaid. And this the said defendants are ready to verify: wherefore they pray judgment if the said plaintiff, his action aforesaid against them ought to have or maintain, &c.

FOURTH PLEA.

And for a further plea in this behalf by like leave of the Court here for this purpose first had and obtained according to the form of the Statute in such case—made and provided, the said defendants say, that the said plaintiff ought not to have or maintain his aforesaid action thereof against them, because they say that after the extension and renewal of said patent in said declaration mentioned, and before the said alleged assignment to the said plaintiff, to wit, on the fifth day of September, in the year one thousand eight hundred and fifty, to wit, at New York, in the Southern District of New York, he the said Edwin M. Chaffee, by his certain writing obligatory sealed with the seal of him the said Edwin M. Chaffee, and now shown to the Court here, the date whereof is the day and year last aforesaid, for certain valuable considerations therein mentioned, moving from the said William Judson to the said William M. Chaffee, did nominate, constitute and appoint William Judson the Trustee and Attorney irrevocable of him the said Edwin M. Chaffee, to hold the said patent in said declaration mentioned under the said renewal thereof in the said declaration mentioned, so that no one should have a license to use the said patent, or invention, or the improvements secured thereby, without the written consent of said Judson first had and obtained, except certain persons in the same writing obligatory referred to, of whom the said plaintiff was not and is not one; and except further that he the said Edwin M. Chaffee should have the right to use the same patent and improvements in any business which he the said Edwin M. Chaffee himself might carry on, as by the said last mentioned writing obligatory may more fully and certainly appear; which said writing obligatory afterwards and before the alleged assignment to the said plaintiff, to wit, on the eleventh day of September, in the year one thousand eight hundred and fifty, was duly recorded, in the Patent Office. And the said defendants further in fact say, that he used the said machines mentioned in the said plaintiff's declaration, and the improvements of said Chaffee therein also mentioned, at the times and in the manner, and to the extent in the said declaration stated and complained of, with such license and permission of said William Judson as he lawfully might for the cause aforesaid. And the said defendants further in fact say, that before the making of the alleged assignment to the said plaintiff in the said declaration mentioned, he the said plaintiff had notice of the said writing obligatory in the plea above mentioned, to wit, at the place aforesaid, and this the said defendants are ready to verify. Wherefore they pray judgment if the said plaintiff ought to have or maintain his aforesaid action against them, &c.

FIFTH PLEA.

And for a further plea in this behalf, the said defendants by leave of the Court, here for this purpose first had and obtained according to the form of the Statute in such case made and provided, say that the said plaintiff ought not to have or maintain his aforesaid action thereof against them, because they say that before the alleged assignment of said letters patent by the said Edwin M. Chaffee to the said plaintiff, to wit, on the twenty-third day of May, in the year one thousand eight hundred and fifty, to wit, at New York, in the Southern District of New York, the said Edwin M. Chaffee entered into a certain agreement in writing with one Charles Goodyear, sealed with the seal of him the said Edwin M. Chaffee, and now shown to the said Court here, the date whereof is the day and year aforesaid, a counterpart of which agreement, executed by said Goodyear, was at the date last aforesaid delivered to said Chaffee,

which said last mentioned agreement in writing is to the purport and effect following, that is to say:

This agreement made by and between Edwin M. Chaffee and Charles Goodyear, witnesseth, that the said Chaffee, for, and in consideration of the sum of three thousand dollars, to be paid to him as herein after specified, hath sold, assigned and set over, and by these presents, doth hereby assign and transfer all his right, title and interest in and to the improvement or invention of compounding and mixing Gum Lac or Shellac, with India Rubber, either with or without sulphur or other ingredients and heat.

And the said Chaffee further agrees to apply either with or in behalf of said Goodyear, for patents in the United States, for said invention, at the expense of said Goodyear; said Chaffee further agrees that the said Goodyear may proceed to take out patents in all foreign countries, for his said Goodyear's benefit, said Goodyear paying the expenses of the same for said improvements in Shellac, and said Chaffee agreeing to execute the necessary papers therefor.

The said Goodyear on his part agrees to pay to the said Chaffee, the sum of three thousand dollars, upon the following terms, viz: one half of the aforesaid sum or fifteen hundred dollars, at the time of the issuing of a patent for said improvements in the United States, or if a patent should be previously granted as a renewal of his said Chaffee's patent, for India Rubber Machinery, then the aforesaid sum of fifteen hundred dollars shall be paid to the said Chaffee upon the assignment of said patent, for said Machinery, to said Goodyear, the remaining one half of said three thousand dollars to be paid within one year from the date hereof.

In the event of neither of the aforesaid patents being obtained, then the first named sum of fifteen hundred dollars is also to be paid within one year from the date hereof. The said Chaffee, upon his part agrees further, that upon the issuing of one or both of the aforesaid patents, for Shellac and Machinery, he will immediately assign them to the said Goodyear.

And it is further mutually agreed, that if at that time the aforesaid three thousand dollars shall not have been paid, the said Goodyear shall make such a lien, transfer or conveyance of his right, title and interest in said patent to said Chaffee, as shall prevent any valid transfer of any rights or interests in said patents, by the said Goodyear, until the said three thousand dollars shall be paid by the said Goodyear.

It is further understood that said Chaffee may reserve to himself the right to use the said India Rubber machinery in any business which he may hereafter carry on; and it is further understood, that if the said patent for India Rubber machinery is not extended, then the whole sum of three thousand dollars shall be paid *for*, or secured *upon* the patent and improvement for Shellac.

In witness whereof we have hereunto set our hands and seals, this 23d day of May, A. D. 1850.

Witness,

JAMES A. DORE.

EDWIN M. CHAFFEE, [L. s.]
CHARLES GOODYEAR, [L. s.]

As by the said agreement in writing may more certainly appear, and the said defendants further in fact say that the said patent in the said declaration mentioned, and said Chaffee's patent for India Rubber Machinery mentioned in the said agreement in writing, set forth in this plea, are one and the same patent, and that the renewal and extension of the same patent, in the said declaration mentioned, is the same renewal of his said Chaffee's patent for India Rubber Machinery, mentioned contemplated and intended in and by the said agreement in writing set forth in this plea, by means whereof the said alleged assignment to the said plaintiff, in the said declaration mentioned, was and is wholly inoperative and void.

And this the said defendants are ready to verify; wherefore they pray judgment if the said plaintiff ought to have or maintain his aforesaid action thereof against them, &c.

BY THEIR ATTORNEYS.

And the said defendants also move the Court for leave to file further pleas, and to give further notice under the general issue.

And on the eleventh of August following, a notice was put on file as follows:—

UNITED STATES CIRCUIT COURT,

RHODE ISLAND DISTRICT.

June Term, 1854.

HORACE H. DAY, vs. }
I. HARTSHORN, et al. } At Law. } Defendants' notices under the
plea of the General Issue.

And under said plea of the general issue in addition to the defences which may be by general law appropriate to said issue, the said defendants will avail themselves of the following defences of which notice is hereby given:

First, That the said Edwin M. Chaffee was not the first and original inventor of the thing patented, or of a substantial or material part claimed as new, but that the same was invented long before said patent was issued.

Second, That the said Horace H. Day at divers times and places before the commencement of his suit, has declared and well knew that other persons had declared, that said Chaffee was not the original and first inventor and discoverer of the thing patented, or of a substantial and material part thereof claimed as new; that what was useful and valuable in the thing patented was not new, and that what was new in the thing patented was not the invention of said Chaffee, and that they will produce the record of the patent office upon the application for the extension of said patent and other testimony for this purpose.

Third, That the thing so patented was before patented to one William Atkinson in the United States by letters patent dated August 15, 1835, and was described in a public work, to wit, the Journal of the Franklin Institute of the State of Pennsylvania, &c., volume 21, page 270, wherein said patent of said Atkinson is printed anterior to the supposed discovery and invention of said Chaffee.

Fourth, That said improvement had been in public use at Boston, Roxbury, Lynn, Salem, Newton, Worcester, Lowell, Chelsea, and Charlestown, in the State of Massachusetts, at Hartford and New Haven in the State of Connecticut, at New York City in the State of New York, at New Brunswick in the State of New Jersey, and elsewhere before the application of said Chaffee for said Patent.

Fifth, That said prior invention, knowledge and use of said improvement, and where the same had been used, was known to John L. Seaverns, Increase S. Hill and Bernard Monagh, of Boston, to Richard Collins of Chicopee, to Joseph G. Waters and John Clifton, of Salem, all of the State of Massachusetts, to William Jackson, Samuel J. Anthony Armstrong, James Newbold, Elijah Bady, Horace H. Day, of New York City, and to James McCully and Cheesman Ackerman, of Brooklyn, all of the State of New York, and to J. Jewell, Ellen Sutphen, Cataline Sutphen, Jane Sutphen, Garritt G. Bookies, Elizabeth Jewell, and Catharine Waseel, of New Brunswick, in the State of New Jersey, and to various other persons who may be called as witnesses thereto.

Sixth, That the specification upon which said Chaffee's patent was obtained does not contain the whole truth relative to his alleged invention or discovery, and especially in this, that it does not specify that in the use of the thing patented it is necessary that the cylinders therein described should be cooled from time to time, or at any time by the introduction of cold water therein or by some other method.

Seventh, That said specification is also erroneous and insufficient, in this, that it specifies a certain degree of heat, to wit; 200 degrees Fahrenheit, as neces-

CIRCUIT COURT OF THE UNITED STATES,

RHODE ISLAND DISTRICT, ss.

June Term, 1854.

HORACE H. DAY.

vs.

AT LAW.

HAETHORN & Co.

And the said Plaintiff, as to the said plea of the said Defendants by them fifthly above pleaded, saith, that the same, and the matter therein contained, in manner and form as the same are above pleaded and set forth, are not sufficient in law to bar or preclude him the said Plaintiff from having or maintaining his aforesaid action thereof against the said Defendants, and that he the said Plaintiff is not bound by law to answer the same. And this the said Plaintiff is ready to verify. Wherefore, by reason of the insufficiency of the said plea in this behalf, the said Plaintiff prays judgment and his damages, by reason of the committing of the said grievance, to be adjudged to him, &c.

By his Attorney,

T. A. JENOKES.

And the demurrers argued by counsel at Chambers, the presiding Judge delivered his opinion sustaining said demurrers, and ordered that on all the special pleas judgment must be rendered for the plaintiff.

DECISION
OF THE
HON. JOHN PITMAN,
JUDGE OF THE U. S. CIRCUIT COURT OF RHODE ISLAND,

ON DEMURRER,

CONFIRMING THE TITLE OF THE CHAFFEE PATENT IN HORACE H. DAY, IN THE SUIT
AT LAW,

HORACE H. DAY

against

ISAAC HARTSHORN, ET AL.

JUNE TERM, 1884.

This is an action to recover damages for an alleged infringement of a patent right. Edmund M. Chaffee, on the 31st of August, 1836, obtained a patent for a certain improvement in India rubber machinery, which he afterwards sold to Charles Goodyear. An extension of this patent was granted to Chaffee on the 30th of August, 1850, and the plaintiff claims under an assignment of the extended patent from Chaffee, dated July 1st, 1853.

The defendants have pleaded the general issue, with notice of special matter under the statute, and four special pleas, to which the plaintiff has filed a general demurrer.

The first special plea sets forth an agreement between said Chaffee and Goodyear, dated the 23d of May, 1850. This agreement contains an assignment of another invention of Chaffee (not yet patented) for compounding gum lac or shellac, and also an agreement to convey to said Goodyear the extended patent for rubber machinery, upon the issuing of the extended patent to Chaffee; and on the part of the said Goodyear an agreement to pay fifteen hundred dollars to said Chaffee, upon the assignment of the said patent. The defendants then say that "they used, with the license and permission of said Goodyear, the machines mentioned in the plaintiff's declaration, at the times and to the manner and extent stated and complained of in the said declaration, as they lawfully might for the cause aforesaid."

The executory agreement set forth in this plea is relied upon as the authority which Goodyear had to license the defendants to use said improvement. It is not averred that said Goodyear ever required the execution of this agreement on the part of Chaffee, or that he ever tendered to Chaffee the fifteen hundred dollars, which he was bound to pay him on the assignment of the same. A case, therefore, is not made which would warrant a court of equity in requiring the specific performance of this agreement, or a court of law in giving damages for its non-performance. Before Goodyear could have had any authority to grant licenses to use this extended patent, it must have been

assigned to him, and not merely agreed to be assigned. No authority being shown in Goodyear to license the defendants, the license set up by them in justification in this plea must be considered as void.

The demurrer to this plea is sustained.

The second special plea sets forth the executory agreement between Chaffee and Goodyear, as set forth in the first, and also two other agreements between said Chaffee and one William Judson, one dated 5th September, 1850, and the other November 12, 1851, and after several averments, closes as follows: "And the said defendants further in fact say, that at the said several times when, &c., in the said declaration mentioned, they, these defendants, used the said machines, in the said declaration mentioned, containing the said improvements and invention therein also mentioned, by and with the license and permission of the said Charles Goodyear, and by and with the license and permission of the said William Judson, as they, the said defendants, lawfully might for the cause aforesaid."

No further authority is shown in this plea for Goodyear to license the defendants than in the first plea. The only question remaining under this plea is, whether Judson had any authority, as set forth in this second plea, to license the defendants. The authority of Judson is to be found, if anywhere, in the agreements between him and Chaffee of the 5th September, 1850, or 12th November, 1851.

From the recitals in the agreement of the 5th September, 1850, it appears that the agreement between Goodyear and Chaffee of the 23d May, 1850, had been modified so that Goodyear had agreed with Chaffee, for himself and others using said patent under him, that they would be at the expense of applying for said extension of said patent, and make Chaffee an allowance for the use thereof of twelve hundred dollars per annum, instead of fifteen hundred dollars for an assignment thereof; that the expenses of procuring said extension had been large, by reason of the opposition thereto, and had not yet been ascertained, and could not then be; that said Judson had had the management of said application for said extension, and had paid and became liable to pay the expenses thereof, and agreed to guarantee to said Chaffee the annuity for the use thereof.

Chaffee then goes on to say in this agreement:—"Now I do hereby, in consideration of the premises, and to place my patent so that, in case of my death or other accident or event, it may inure to the benefit of the said Charles Goodyear and those who had a right to the use of said patent under and in connection with his licensees, according to the understanding of the parties interested, *nominata, constitute and appoint* said William Judson my trustee and attorney irrevocable, to hold said patent and have control thereof, so that no one shall have a license to use said patent or invention, or the improvements secured thereby, other than those who had a right to use the same when said patent was extended, without the written consent of said Judson first had and obtained."

Here is no authority given to Judson to license any one, but only to prevent licenses from being given to others without his written consent, except Goodyear and those connected with him as specified in said agreement.

The agreement of November, 1851, recites that it was agreed by the agreement of 5th September, 1850, "on what terms said Chaffee would continue to hold said patent for the benefit of said Judson and Charles Goodyear and his licensees."

"And whereas in said agreement there was an omission to state that if said licensees continued to use the improvements in said patent named, they should each one contribute and pay said Judson, his proportion of the expenses and services expended in obtaining the renewal of said patent, which it was intended that said licensees should pay unto Judson, in case they continued the use of said improvement, for which said patent was issued after the extension thereof."

"And whereas it is now agreed by said Chaffee and said Judson, that said agreement shall be so modified as to secure the objects more fully intended to be secured by said agreement: Now it is agreed that said licensees shall each

pay his share of the services and expenses to said Judson, as the *condition* on which they shall have the license of said Judson to use said improvements; and that on the payment of his or their share or proportion of the services and expenses, said Judson shall be authorized to give each a license to use said improvements, on their paying as aforesaid severally, each for himself, or his firm, or company."

It is not averred in this plea that the defendants paid their share of the expenses and services to said Judson, which was made the condition precedent on which they were to have the license of said Judson, and upon the payment of which said Judson was authorized to grant a license to the defendants. In answer to this objection to the plea, it is said that this part of the agreement of November, 1851, was made for the sole benefit of Judson, and to enable him to collect these expenses of Goodyear's licensees which he had paid or agreed to pay.

That a condition made for the sole benefit of any one he has a right to waive, that Judson, if he granted this license to the defendants without requiring this payment, virtually waived the same; that as Chaffee had no interest in the performance of this condition, the license of Judson is good, whether the defendants did or did not pay their proportion of these expenses.

If Chaffee was responsible for these expenses, then he had this interest in the performance of this condition by the defendants, that the payment by the defendants might enable Judson more surely and speedily to pay them and prevent Chaffee from being called on to pay them; or if Chaffee had been obliged to pay any of these expenses, then he was interested that Judson should require the fulfillment of this condition, as a means of enabling Judson to repay him. It is not averred that Chaffee was not responsible for these expenses, nor does it so appear from these agreements. The patent was extended for his benefit and was granted to him, and services rendered and expenses paid in the procurement of the same would *prima facie* be a fair charge against him, and if he was not responsible for them at all, there was no need of any argument to save him from paying the same.

If at the time of the agreement of November, 1851, when the licenses were granted by Judson to the defendants, all these expenses and services had been paid by Judson, then Chaffee had no interest in the payment by the defendants of their proportion of the same to Judson. But this does not appear in the plea.

Upon the facts presented to me by this plea and confessed by the demurrers, I cannot say that Chaffee had no interest in the performance of this condition. I cannot, therefore, give an effect to the license of Judson as sufficient to justify the defendants without an averment of the condition precedent on their part, or without an averment of such facts as would enable me to say that Chaffee had no interest in its performance.

But I have serious doubts, if Chaffee had no pecuniary interest in the performance of this condition, whether at law the license of Judson would be good without it. Interest or no interest Chaffee had a right to require it. He is the source of power in this respect, and had a right to say on what terms licenses should be granted. Judson was but acting under his authority as his attorney, with a power indeed coupled with an interest, and connected with an agreement, which, if executed on his part in good faith, may render the power irrevocable; but this of itself did not enable Judson to dispense with the conditions required by the power of attorney as pre-requisite to the authority granted him to grant licenses.

However a court of equity might consider itself justified in viewing this instrument, when presented under certain aspects; yet sitting in a court of law, and deciding upon the legal effect of its provisions, of justifying the license set up by the defendants without any averment on their part of the performance of the condition precedent, the inclination of my mind is to consider such a plea insufficient, without feeling myself at liberty to speculate upon the question whether Chaffee had or had not any interest in requiring a performance of the condition precedent.

I therefore sustain the demurrer to the 2d plea in bar.

The third special plea sets out the agreement between Chaffee and Judson of 5th September, 1850, and without any averment that the defendants belong to that class of persons known as Goodyear's licensees, they justify the use complained of in the plaintiff's declaration, under the license and permission of Judson.

No authority is given under the agreement of September 5, 1850, to Judson to license any person, and under neither agreement to license any person, except Goodyear's licensees.

I sustain the demurrer to this plea.

The 4th special plea sets up the agreement of the 28d May, 1850, between Chaffee and Goodyear, as in the 1st special plea, without averring any license to the defendants, and say that by means of the said agreement between Chaffee and Goodyear, the assignment to the plaintiff in the declaration mentioned was and is wholly inoperative and void. This plea amounts to neither more nor less than the general issue, but cannot for this cause only be adjudged bad on a general demurrer. It presents the naked question, whether the executory agreement upon a good consideration without any averment of any steps being taken on the part of Goodyear to enforce the execution of the same, or any notice, expressed or implied, to the plaintiff of the existence thereof, would of itself make void the assignment of Chaffee to the plaintiff for a valuable consideration.

The statement of the question presents its own answer.

I sustain the demurrer to this plea.

Upon all these special pleas judgment must be rendered for the plaintiff.

JOHN PITMAN,
District Judge, Rhode Island District.

UNITED STATES OF AMERICA.

RHODE ISLAND DISTRICT, SO., SS.

CLERK'S OFFICE, CIRCUIT COURT,
At Providence, Nov. 4, 1854.

I, Henry Pitman, Clerk of said Court for said District, do hereby certify that the above and foregoing ten pages contain a true copy of the original opinion now on file in this office, duly examined and compared.

In testimony whereof, I have hereunto set my hand and the seal of said Court, on the day and year above written.

[L. s.]

HENRY PITMAN, *Clerk.*

And at the November term, A. D. 1854, the plaintiff, having filed his replication to the plea of general issue, the following additional notices were filed by the defendants under said plea.

And under said plea of general issue, in addition to the notices already filed in court and given, the said defendants give notice, that under the fifth head they will also offer testimony to prove that said prior invention, knowledge, and use of said improvement, and where the same had been used, was known to Arnold Peters, John T. Walker, and George B. Holmes, all of the city of Providence, in said district, and to various other persons who may be called as witnesses thereto. And further, that the said invention, or the material parts thereof, were in public use prior to the application of said Chaffee for a patent, in Providence, in said district.

By their Attorneys,

AMES, BRADLEY & PITMAN.

December 2, 1854.

UNITED STATES CIRCUIT COURT.

RHODE ISLAND DISTRICT, SS.

HORACE H. DAY

vs.

AT LAW.

ISAAC HARTSHORN, ET AL.

And in addition to the former notices given by said defendants, under their plea of general issue, the said defendants will avail themselves of the following defences of which the said plaintiff will take notice.

That said alleged invention of said Chaffee, or substantial and material parts thereof, claimed as new in said patent, were known to and used by many persons in the United States prior to the time of the alleged invention by said Chaffee, and was in public use before said time.

That the same had been described in public printed works anterior to the supposed discovery or invention thereof by the patentees. And among others, in Newton's London Journal and the Repository of Patent Inventions, published in London; The Journal of the Franklin Institute; The Operative Machine, published in Philadelphia, and Ure's Dictionary of Arts, &c. And that the thing patented by said Chaffee is not useful as described by him in his said patent.

And further, that the following are the names and places of residence of the persons whom the said defendants intend to prove to have possessed a knowledge of the thing, or substantial and material parts of the thing patented by said Chaffee, prior to his alleged invention thereof, and the places where it or they were so used before said alleged invention, and also of the persons by whom he intends to prove the same:—

NAME.	RESIDENCE.	PLACES WHERE KNOWN AND USED.
Horace H. Day,	New York City.	New Brunswick.
Peter C. Onderdonk,	New Brunswick, N. J.	do.
Thos. Hutchinson,	Paris, France.	do.
G. B. Millard,	Rahway, N. J.	do.
Lord Skinner,	Newark, N. J.	do.
Jas. McCully,	Brooklyn, N. Y.	do.
Cheesman Ackerman,	do.	do.
J. Jewell,	New Brunswick, N. J.	do.
Ellen Sutphen,	do.	do.
Cataline Sutphen,	do.	do.
Jane Sutphen,	do.	do.
Garritt G. Bookies,	do.	do.
Elizabeth Jewell,	do.	do.
Catharine Wasel,	do.	do.
Patrick, (a workman for the firm of Hutchinson & On- derdonk),	do.	do.
Ohas. Gregg,	Brooklyn, N. Y.	Lowell, Mass.
James Newbold,	New York.	do.
Daniel Hodgman,	do.	do.
Elijah Bady,	do.	do.
John Clifton,	Salem, Mass.	Salem, Mass.
Jos. G. Waters,	do.	do.

NAME.	RESIDENCE.	PLACES WHERE KNOWN AND USED.
Wm. Atkinson,	Brooklyn, N. Y.	Lowell, Newton, Boston, Salem, Roxbury, Chelsea, Mass.
Archibald Hoyt, S. F. Armstrong, John J. Howe, Richard Collins,	Troy, N. Y. New York City. Daley, Conn. Chicopee, Mass.	Boston and Lowell, Mass. do. Roxbury, do. Winchester Co., N. Y. Lowell, Boston, Newton, and Salem, Mass.
Rufus F. Newhall, John L. Seaverns, Increase S. Hill,	Lynn, do. Boston. do.	Salem, Boston, and Lynn. Boston, Roxbury, Salem, Lynn, Newton, and Worcester, Mass. Hartford, and N. Hartford, Conn.
Barnard Monagh,	Boston and Roxbury.	Boston, Charlestown, Somerville, & Roxbury, Mass.
Wm. Jackson, Cornelius S. Tompkins, Edwin Field, Arnold Peters, John T. Walker, George B. Holmes, Charles Jackson,	New York City. Providence. do. do. do. do. do.	New York City. Providence, R. I. do. do. do. do. do. and Salem, Lynn, Mass.
Abraham Fowler,	Manchester, Mass.	Salem, Lynn, and Boston, Mass.
Charles McBurney, James O'Donnell, Dennis O. Gately, Ebenezer B. Scott,	Boston. do. or Roxbury. do. do. Boston and Roxbury.	Boston, Salem & Roxbury. do. do. Boston, Salem, Lynn, and Roxbury.
Wm. S. Lowell,	Boston.	Boston, Salem, Lynn, and Roxbury.
John Haskill,	Roxbury.	Boston, Salem, Lynn, and Roxbury.
George W. Pratt,	New York City.	Boston, Salem, and New York City.
Samuel Marsh, Daniel Chaffee, Samuel O. Bishop,	do. Roxbury. New York City.	Staten Island, N. Y. Roxbury and Boston. Boston, Lynn, Salem, Roxbury, Mass., and N. Y. City.
Wm. S. Humphrey, Adolphus Stone, Mastel Stoddard, Jos. N. Dudley,	Newton, Conn. Harlem, N. Y. N. Bridgewater, Mass. Roxbury.	Roxbury and Boston. do. do. do. and Lynn. do. and Newton.

Submitted by

J. S. PITMAN,

Attorney for Defendants.

per S. AMES,

C. S. BRADLEY & SELF,

Counsel for Defendants.

And the cause being called for trial on the twenty-eighth day of said term, to wit, on the 23d of January, 1855, and the death of one of the defendants, Daniel Hayward, having been suggested, it was argued by counsel and committed to the following jury, on the sixty-fourth day of said term, to wit, March 7, 1855. (The death of one of the jurors occurring during the trial, it was agreed to proceed with eleven.)

GEORGE A. KENTON, *Foreman*.

WM. BLANDELL.

CHAS. APLIN.

HUGH CRAWFORD.

JABEZ W. MOWEY.

THOMAS J. SWEET.

ANDREW J. BULLOCK.

CALVIN T. WATERMAN.

GEORGE JENCKES.

ALFRED A. HAWKINS.

JOHN R. EMMES.

Who return a verdict which is duly affirmed in the words following, to wit: We find the defendants, guilty in manner and form as alleged in the Plaintiff's declaration, and assessed damages to the Plaintiff in the sum of Four Thousand Dollars.

G. A. KENTON, *Foreman*.

Upon which the Defendants request and are allowed 60 days to file a bill of exceptions.

UNITED STATES OF AMERICA.

RHODE ISLAND DISTRICT.

CLERK'S OFFICE CIRCUIT COURT,
At Providence, March 8, 1855.

I, HENRY PITMAN, Clerk of said Court for said district, do hereby certify that the above and foregoing 80 pages contain a true copy of the record in the case at law, Horace H. Day *agt.* Isaac Hartshorn, *et al.*, now on file in this office, duly examined and compared.

In testimony whereof I have hereunto set the seal of said Court, and my hand, in the day and year above written.

[L. s.]

HENRY PITMAN, *Clerk*.



CIRCUIT COURT OF THE UNITED STATES

FOR THE

DISTRICT OF RHODE ISLAND.

Copy of the Testimony in the Case at Law.

HORACE H. DAY,

vs.

ISAAC HARTSHORN & CO.

COMMENCED, JAN. 23, 1855.

TERMINATED, MARCH 8, 1855.

NEW YORK:

JOHN F. TROW, PRINTER, 49 ANN STREET.

1855.

S. H.



U. S. CIRCUIT COURT,

DISTRICT OF RHODE ISLAND.

BEFORE JUDGE PITMAN AND A JURY.

HORACE H. DAY,	}
<i>against</i>	
ISAAC HARTSHORN & CO.	

PROVIDENCE, *Wed., Jan. 24, 1855.*

FIRST DAY.

TESTIMONY OF MESSRS. ANTHONY, BOURNE, SHAW, WARE,
BABCOCK, AND SCOTT.

Mr. T. A. JENCKES opened the case on the part of the
Plaintiff to the Jury.

THOMAS S. ANTHONY SWORN AND EXAMINED BY
MR. JENCKES.

Q. (Handing witness the contract between Chaffee and Day for the convey-
of the patent.) Will you look at that paper?

A. I witnessed the execution of this paper.

Q. That is your signature to it as subscribing witness?

A. Yes, sir.

Q. Are you acquainted with the parties who signed it?

A. I am.

Q. Did you see them sign it?

A. I did, in your office.

Cross-examined by Mr. Bradley.

Q. How do you fix the date of this paper?

A. I recollect distinctly the date of it from having considerable work to do
at that time, and its being in the neighborhood of the fourth of July. I am
quite certain that it was executed on the day it purports to have been executed.

Q. I ask how you are able to say that it was executed on that day? I want to have you fix it more definitely than that you were particularly engaged about the fourth of July. If you have any thing to state, state it; if not, say so.

A. I only say it has been on my mind ever since the day it was executed. About the date it was executed, having had work to do in relation to these cases, from that time to the present that date has been constantly recurring to my mind in the course of the examination. I wrote at that time several notices.

Q. You are counsel in this case, are you not?

A. I do not consider myself so. I have done work for the plaintiff in this case.

Q. Does not your name appear as counsel?

A. Not to my knowledge.

Q. It is so announced in the newspapers?

A. I recollect seeing it in a newspaper at Newport, when the case was tried there.

Q. You are a lawyer by profession, and have been at work as such in this case?

A. Yes, sir; but I never understood from Mr. Day that I was engaged as counsel to appear in court on his cases.

Q. You appear in court as a witness, and you work professionally out of court?

A. This is the first I knew that I was to be a witness here.

Q. I find no fault. Were any other papers drawn about that time?

A. There were several notices drawn to parties in the suit and out of the suit, notifying them of the transfer of this patent, which I wrote out and sent to the parties; and it was about the time, I don't know but it was the next day, at any rate, immediately after the execution of this paper that I wrote out all these notices.

Q. You wrote out the notices immediately after the execution, and forwarded this paper?

A. Yes, sir; I don't know but it was the same day. It was as fast as I could write.

Q. Who drew this paper, do you know?

A. I don't think I know who wrote it. Perhaps I can tell whose handwriting it is. There were a good many of us writing at that time.

Q. When did Mr. Day first appear here?

A. The first I saw of him, I believe, was when I was called in as witness to the execution of this paper. It might have been that I saw him once before, but I did not know who he was—any thing about it. The first connection I had with him, if I recollect right, was when I witnessed this paper.

Q. Do you know whether the paper was prepared here or brought from New York by Mr. Day, or the draft of it?

A. That I do not know.

Q. What is your best recollection and belief about it? You are in a position to know something about these matters?

A. I knew nothing about these matters until the trade between the parties had been made, and this paper came to be executed; I do not know what they had done previous to that.

Q. Was any other paper executed between these parties, to your knowledge, at that same time or about that time?

A. I recollect now, that previous to that there was a bond for the transfer made.

Mr. JENCKES. That is this same paper?

Witness. I have not read this paper.

Q. Perhaps you had better know what you are testifying about?

A. If I had known I was coming in, I should, perhaps, have examined it. I came in here accidentally. This first paper I do not know any thing about. This is a bond or agreement for the transfer. I think it was all completed before I was called to witness the transfer.

Q. Then the other paper you were testifying about was the transfer itself, and you said the first time you saw Day was when you witnessed the acknowledgment of it? You thought you were testifying about the other paper?

A. I did not look. My impression was that the agreement to transfer was witnessed by somebody else, and that I was called to witness the transfer itself; but it is the other way; I witnessed the agreement to transfer, and, I think, knew nothing about it until I was called in to witness it.

Q. You say the first you saw of Mr. Day was when you witnessed the acknowledgment of this paper. Are you now able to state whether he brought that from New York, or whether it was drawn here, or who drew it?

A. I do not know any thing about that. This paper is in the handwriting of Samuel A. Boler, who was then in the Hartford, Providence and Fishkill Railroad Co.

Q. Will you look at it again, and say whether you are correct about your recollection?

A. That looks like his handwriting. Yes, sir.

Q. How about the paper?

A. That paper was some that Mr. Jenckes bought in New York.

Q. The first you knew about it then was, when you were called in to witness the agreement between Day and Chaffee for the transfer of the patent?

A. That is the first I knew about it. I was called in to meet the parties.

Q. And Mr. Day was there, and you witnessed the agreement as one of the parties?

A. Yes, sir.

Q. Well, now, are you able to state whether you recollect any other paper that was named about that time?

A. I do not recollect distinctly about that. There was a good deal done about the execution of that paper, and some of it was necessary to remember, and some was not, and I do not remember the part that was merely work. I know we were working pretty hard for some time.

Direct, resumed by Mr. Jenckes.

Q. You spoke of notices. What were these notices?

A. Notices of the transfer of the patent.

Q. Did you send one of them to the defendants?

A. I did.

(Mr. JENCKES. The gentleman will produce it, and let us see what it is.)

(Mr. BRADLEY at first objected to the mode of proceeding, but consented afterwards to take the notice, and produce the paper when required.)

Q. You have stated that you were present at the execution of the subsequent paper, were you present when any money was received?

A. Yes, sir.

Q. State the amount of it?

A. It was \$11,000 or \$11,500,—\$500 bills, I recollect.

Q. Where was it paid?

A. In your office; Mr. Richardson passed the money over. I think it was exactly \$11,000.

Re-cross-examined by Mr. Bradley.

Q. You say Mr. Richardson paid the money; who is Mr. Richardson?

A. He appeared then to be counsel for Mr. Day. I know he examined the paper transferring the patent, and they were satisfied it was right. Mr. Day, I think, handed in the money, and counted it out by separate bills of \$500 each; Mr. Chaffee took it, and said it was right.

Q. What money was it?

A. I do not know.

Q. New York or Providence?

A. I think Providence, but I am not certain about that. I simply glanced at it, and saw the five hundred dollars on the corner of the bills. I did not stop to see what bank it was.

Q. Were you called upon to witness that transaction?

A. I think I went in there accidentally then; I was in the habit of passing in and out of Mr. Jenckes' office; my office is nearly opposite, and I was in there very frequently.

Q. You spoke of certain notices sent to us; did you not keep copies of those notices?

A. I kept one copy; they were all alike.

Q. Where is that?

A. I cannot say now; I think I handed it to Mr. Day.

(Mr. RICHARDSON. We have got it.)

(Mr. BRADLEY. You might as well produce it.)

Q. (By Mr. JENCKES.) Here is one to the New England Car Spring Co. Look at that, and see if it is the same in substance?

A. They were all exactly alike, except the address. This was one of them.

Q. (By Mr. JENCKES.) Did you receive notices of that kind?

A. Yes, sir.

Q. (By Mr. JENCKES.) What is that?

A. This is a notice that Mr. Chaffee sent away; he had disposed of his interest in the patent to Mr. Day.

Q. (By Mr. BRADLEY.) How did you send or serve this notice on the defendant?

A. I gave the notice to George A. Billings, who was then deputy sheriff, and told him I wanted him to be sure to serve it on Dr. Hartshorn. The notice was served, and the affidavit, I believe, has been taken.

Q. We want to distinguish between what the witness is swearing to properly, and what he is not.—What notices did you serve, and what not?

A. The one to the defendants, all the others I deposited in the Post Office.

Q. Tell us who were in the room at the time these bills were passed by Richardson to Chaffee?

A. Mr. Chaffee, Mr. Jenckes, Mr. Richardson, and I think Mr. Boler.

Q. That is all you recollect were there?

A. Yes, sir.

Q. Was Boler accustomed to write law papers for Jenckes?

A. Yes, sir, he did a good deal of copying for Jenckes. There was a great deal to be done; it took more than one person to do it.

Q. (By Mr. JENCKES.) Look at that paper.

A. This is the paper I gave Billings to serve.

Q. Well, that is a different paper entirely?

A. Yes, Sir; this is Chaffee's notice—that was Day's notice.

Q. The other was the one you gave to serve?

A. That was my impression.

Q. I have no doubt it was an honest impression?

A. There was any quantity of papers, and whatever I put my ear-mark on that I can identify. This I can state distinctly taking to Billings to serve just before we went to Newport.

Q. Well, that is the only paper you are now able to say you can identify? These matters may or may not be important, but it is important they should be correctly stated.

A. What produces a confusion is, that after I wrote the notices to all these parties, they came and took them from me, and said they would not have them served that way. I was directed to put them in the Post Office—they wished to have them served specially. Subsequently, they handed them back to me with an order to put them into the Post Office, and I took the list of names and put them in the Post Office, except the one to Hartshorn & Co., and that appears from this to be the notice of Chaffee's transfer, signed by him. I recollect very distinctly the memorandum made by Billings when he returned. Then, subsequently I took him before the Commissioner to swear to it. This is the paper I handed him.

Q. This is the paper you swore about?

A. Yes, sir, this is one.

Q. And that copy *verbatim et literatim* was a different one?

A. There were two sets of papers—Day's notice and Chaffee's notice.

Q. And you were swearing to one set when you thought you were swearing about another?

Q. (By Mr. JENCKES.) You remember the fact that there were two sets?

A. O yes, sir.

Q. (By Mr. JENCKES.) Have you got a list of the persons to whom you sent notices or copies, in your office?

A. It is my impression that I handed it to you. It was a list in your handwriting, I think, and I subsequently handed it to you.

After submitting a number of papers, Mr. Jenckes concluded his opening to the Jury.

AUGUSTUS O. BOURNE, SWORN AND EXAMINED BY MR.
JENCKES.

- Q. Where do you reside?
 A. In this city.
 Q. Are you acquainted with the India-rubber manufacture?
 A. To some extent—considerably.
 Q. Are you acquainted with the invention of Edwin N. Chaffee?
 A. I am.
 Q. How long have you been acquainted with it?
 A. About a year and a half with the patent itself; but with the machines made according to the patent as long as I can recollect.
 Q. Are you acquainted with the defendants' factory in the city?
 A. Partially—with some portions of it.
 Q. Do you know what process they used for grinding rubber?
 A. I have seen machines in operation with the rubber in them.
 Q. When?
 A. I should think it was about a year and a half ago.
 Q. Did you ever give an affidavit in any of these cases?
 A. I did.
 Q. State whether or not it was about the time you gave that affidavit?
 A. It was within a day or two before, or several days.
 Q. Did you know whether or not the suit was pending, at the time you gave it?
 A. I understood it was.
 Q. What machines did you see there?
 A. I saw several machines. I cannot recollect the number at present. They were made, as all machines are made, generally, according to the Chaffee patent, as near as I could perceive.
 Q. Did you see them in operation?
 A. I did.
 Q. Did you see the rubber in them?
 A. I saw the rubber in them.
 Q. Did you see what effect was produced on the machines?
 A. The rubber appeared to be soft; it was softened as rubber generally is, by being passed through machines of that description.
 Q. Did you see any one working with it?
 A. I saw persons tending them, but I have no knowledge of who they were.
 Q. Do you know whether or not these machines continue to be used there?
 A. I saw them at different times, for, it might have been, a month—or two different times in the course of the season.
 Q. Did you see them longer than that, or at any other time?
 A. I could not say whether I did or not.
 Q. What was the reason you did not see them afterwards?
 A. Because it was not in my power to see them.
 Q. Why so?
 A. When I saw them it was through the windows of the factory, which were open, but after a certain time—I cannot state the time—they were closed by blinds and iron gratings.
 Q. About what time were they closed?
 A. I should think it was somewhere within six or eight weeks of the time the suit was commenced.
 Q. Do you remember that it was about the time of the trial at Newport?
 A. I do not.
 Q. (By Mr. RICHARDSON.) Did you say this suit?
 A. From the time proceedings were commenced against Isaac Hartshorn. I do not know what suit; it was some proceedings.
 Q. Can you state the number of machines you saw there?

A. I cannot precisely. I should think there were some six or seven, and I could see parts of others, which all seemed to be built alike.

Q. What were these machines doing?

A. They seemed to be grinding rubber. There was rubber in them, and they were revolving—I supposed for the purpose of grinding rubber.

Cross-examined by Mr. Bradley.

Q. Have you ever applied to Dr. Hartshorn for leave to see what machines he used?

A. Never.

Q. Did you ever let him know that you were looking or wanted to look?

A. I never took the trouble to.

Q. And you have no reason therefore to think that he would not let you in at any moment. Just tell us about this grating. What was the size of the space between them?

A. The blinds were closed blinds; therefore no person could look through them.

Q. How long have they been on his windows, sometimes open and sometimes shut? Do you know?

A. I do not. They might have been there ever since his factory was started. They were generally out during hot weather.

Q. Now tell us about the grating.

A. It was composed of several small bars of iron, probably as large as your finger, with an aperture between them of probably three inches.

Q. Do you know how long they have been there?

A. I know how long, about, it is since I first saw them there.

Q. They are certainly not put there to prevent people looking in?

A. No, sir.

Q. Tell the jury, if you please, how old you are.

A. Twenty years old the first of October last.

Q. (By Mr. RICHARDSON.) Do you know the object of those gratings when they were put there?

A. I do not.

EDWIN SHAW SWORN AND EXAMINED BY MR. JENCKES.

- Q. Where do you reside?
 A. In Providence.
 Q. What is your occupation?
 A. A machinist.
 Q. Have you been in the employment of the defendants?
 A. I have.
 Q. What did you do for them?
 A. Built machinery, a majority of the time.
 Q. What kind of machinery?
 A. India rubber—for the purpose of working India rubber.
 Q. What did they do to the rubber?
 A. With some of the machines they ground it, and with some they made what they termed rubber sheets.
 Q. When did you make these machines?
 A. About 1849-50.
 Q. Any since?
 A. In 1852-3.
 Q. How many machines did you make in each year?
 A. I do not recollect.
 Q. How many in all?
 A. Seven.
 Q. Do you know how many machines for grinding rubber and spreading it on cloth are in use in that establishment?
 A. Not at present.
 Q. How many in 1853?
 A. I could not tell exactly.
 Q. As near as you can?
 A. Including the whole, I believe there were about eleven.
 Q. Were you in this factory in the summer of 1853?
 A. I believe I was.
 Q. Were these machines then in operation?
 A. Yes, sir.
 Q. Was there any other process for grinding rubber than that by these machines in that factory?
 A. There was at different times.
 Q. I mean in 1853?
 A. I think there was not.
 Q. Are you acquainted with the patent granted to Chaffee? Have you ever read it?
 A. I have.
 Q. Have you examined the drawings?
 A. I have.
 Q. Are these machines in the defendants' factory substantially like those described in the drawings and specification, or not?
 A. These machines are moved by a friction or draft, one roller running faster than the other.
 Q. Are they heated by steam?
 A. Some of them are.
 Q. Are those that you built heated by steam?
 A. A part of them.
 Q. What effect do they have upon the rubber?
 A. They take it from the natural state, and grind it until it becomes soft and pliable.
 Q. Are any other materials mixed with the rubber while in the machine?
 A. Yes, sir.
 Q. Coloring matter?
 A. Yes, sir.

Q. At what part of the operation is the coloring matter mixed with the rubber?

A. The rubber is first ground. It becomes soft, and then the coloring is mixed. It is applied to the rollers, or thrown on to the rollers.

Q. State whether or not the grinding continues while the coloring is being mixed?

A. It does.

Q. How is it worked into sheets?

A. By being softened by heat betwixt two rollers. It travels over one roller, down through between another roller that comes in contact with what you may term a middle roller, and is spread out into sheets upon a piece of cloth or canvas.

Q. Have you seen the Chaffee machines in any other establishment, or in use any where else?

A. I have seen them at Brown & Bourne's.

Q. When did you see them there?

A. Within two months.

Q. Do you know whether the defendants' factory is now running, or not?

A. I do not.

Cross-examined by Mr. Bradley.

Q. You spoke about one of these rollers going faster than the other, and causing friction; is that the case with the spreading machine in that factory?

A. The one for making sheets does not.

Q. You spoke about a part of them being heated by steam; where there is provision made to let in steam, there is also provision made to let in cold water, is there not?

A. Yes, sir.

Q. Is that cooling by cold water indispensable to the machinery?

A. It is not.

Q. What would be the effect of having no cold water let into the cylinders?

A. In many instances it would heat the rubber too hot.

Q. You spoke of other materials being mixed with the rubber; will you please tell us what those other materials are? Are they, or are they not, materials included in the vulcanizing patent of Chas. Goodyear?

A. My business at Dr. Hartshorn's establishment was to build machines, and he also used to ask me to make some few improvements if I could; therefore I did not pay any attention to the composition.

Q. You do not know what the composition was?

A. I cannot swear to any thing of that kind.

Q. I ask you generally if you do or do not know that the manufacture carried on at that establishment is the manufacture of vulcanized India rubber into boots and shoes?

A. It was, at the time I left.

Q. Did they make any thing else but vulcanized rubber materials?

A. Not that I know of.

Q. Now do you or do you not know that vulcanized rubber is claimed, at least, by the patent of Chas. Goodyear?

A. I don't know any thing about it.

Q. Is not the name of Goodyear stamped upon every article that leaves that establishment?

A. I do not recollect that it is.

Q. According to the best of your knowledge and belief, have the boots and shoes that stamp on them, or not?

A. I could not say any thing about it; it was out of my line of business; I never noticed.

Q. Were there not some eleven machines for warming and spreading the rubber after it was ground?

A. Yes, sir.

Q. They were not all for grinding?

A. No, sir.

Q. Will you state more definitely the time you left there?

A. About the 20th of June, 1858.

Q. Were you there afterwards?

A. I was in his mill about three minutes, a few days afterwards.

Q. That was all the time you were there during the summer?

A. Yes, sir.

Direct resumed by Mr. Richardson.

Q. Have you ever been there since?

A. I was there about three minutes, a few days afterwards. I have not been there since.

Q. That was in July or August?

A. In June.

Q. You say you left on the 20th of June?

A. About that time.

Q. Can you state how long it was after that that you were in again?

A. I could not.

Q. You have never been in there since?

A. No, sir.

Q. Ever passed there?

A. Yes, sir, frequently.

Q. Did you see him?

A. No, sir.

Q. Was it not about the time the suit was commenced that you were in last?

A. It was about that time.

Q. Was it not after the suit was commenced? Had not you heard of the suit at the time you were there?

A. I had not.

Q. (By Mr. BRADLEY.) How are these spreading machines made?—with three cylinders?

A. Yes, sir.

Q. (By Mr. BRADLEY.) Have you not seen calenders used in our calender establishments?

A. Cloth calenders?

Q. Yes, sir.

A. No, sir.

LEANDER M. WARE, SWORN AND EXAMINED BY
MR. JENCKES.

- Q. Where do you reside?
A. In Providence.
Q. Have you ever been connected with the India-rubber business?
A. I have.
Q. When?
A. In 1889, '90, 1, 2, 5, 6, 7, and 8.
Q. Whereabouts?
A. In the city of Providence.
Q. Are you acquainted with the patent granted to Edwin M. Chaffee for improvements in the manufacture of rubber?
A. So far as I can understand from reading the patent, I am.
Q. Have you examined the specifications and drawings?
A. I have examined his claims and drawings; his specifications generally I have not, wholly.
Q. Have you ever been acquainted with the process of preparing and applying rubber by Chaffee's invention in actual use?
A. But a short time practically.
Q. When was that?
A. In '45, 6, 7, and 8.
Q. Are you acquainted with the practical use of this invention?
A. I think I understand the theory and principle of it; I never practised it to any extent.
Q. Have you ever been in the factory of the defendants?
A. I have.
Q. When?
A. I think in June or July, 1853. I was summoned by due process to go there. I do not recollect the date.
Q. Was it about the time you gave an affidavit in the equity case?
A. Yes, sir.
Q. Who went with you?
A. Messrs. Babcock, Chaffee, and Richardson.
Q. (handing him a paper.) Is that the affidavit you referred to?
A. That is my signature; I presume it is.
(The affidavit was on motion for injunction, and dated August 2, 1853.)
Q. You say you were there about the time of that affidavit?
A. Yes, sir; that was the object in being there.
Q. Was it the same day, or the day before you signed it, that you were in the factory?
A. I should think it was one or two days before.
Q. Will you state what process you saw used there for the purpose of preparing and applying the India-rubber to the various articles?
A. The time that I was there would not allow of much observation, but what I saw was what I consider substantially as claimed—
Objected to by Mr. BRADLEY, as the witness had not read the specifications.
The COURT. He can state what he saw.
WITNESS. It might be proper for me to say what I did understand when I said I had not read the whole detail of the specifications. I read them sufficiently for me to know what the process claimed was, and when I see it infringed, I need no further detail to give the specifications as I saw them.
Q. Mr. BRADLEY. You stated that you read the claim?
WITNESS. I read the claim, and so much of the specifications or detail as to confirm what I understood the claim to be. I understand the claim to be, from the description, so far as I read it, the working of rubber by friction, or a sliding motion, the machinery being heated or otherwise, without a

solvent. I think I need no further information about the details of the specifications.

Mr. BRADLEY. You stated you had read part of the specifications.

WITNESS. I have read sufficient to form my opinion on a knowledge of the claim.

Q. State now what you saw in that factory.

A. I was there but a short time, and hence could not detail any further than what I saw. I saw machinery to which my attention was particularly called, and noticed that it moved with a friction. I saw that it was heated by steam. It could be otherwise heated, to be sure, without steam. I saw the rubber worked without a solvent; not only by my own observation did I know it, but by the assurance of the workmen. That far I saw, and I think fulfilled the object of my visit there. I had no curiosity about business at all.

Q. Was Dr. Hartshorn present?

A. He was.

Q. Did he point out to you the machinery that he used?

A. He did.

Q. How many machines did you say he used?

A. If my memory serves me right, there were of what we term grinders, nine. A pair of calenders—at least a machine for a calender and spreading—and another for spreading or coating.

Q. Was there rubber in these machines?

A. Yes, sir, in most of them. There was none in the calender or spreading machine that I recollect. The process, however, of using them was courteously explained by the Dr. himself.

Q. Will you now describe the operation of these grinding and calender machines, as explained to you?

A. It needs no explanation. It is simply two cylinder rollers geared together in such a manner that one runs more rapidly than the other. The rubber is drawn in between them, and the fibres are torn apart by the friction. The fibres are softened by the heat produced by steam or friction, or other means. Without that friction, or without that heat, the rubber cannot be worked. I say it cannot be worked to any profit. After it has passed through what would be usually known as the breaking-in machine, it passes through the others of a different friction, or with not so much friction, until it becomes in a proper state to be carried to the rollers, or machines that are to convert it into sheets, or spread it upon the cloth.

Q. Any substance mixed with it in any part of the operation?

A. There is.

Q. State when and how.

A. It depends upon the state the rubber is in. When the required material was first put into the machine, I saw nothing of any foreign matter added to it; but in its course of preparation, my attention was very frequently called to a liquid that was being poured in.

Q. When was the coloring matter put in?

A. While the rubber was passing through the rollers.

Q. What stage of the operation?

A. I cannot say at what moment; it was when the rubber was in a condition to receive the coloring matter. Although, described as a very powerful solvent, still I viewed it, in another light. My impressions were made up from what I saw.

Q. Do you know what that matter was?

A. I do not.

Q. Do you know that any lampblack was used?

A. I should think there was lampblack used in it, for it was of a very dark color.

Q. How many sets of rollers were used, or how many times did it pass through the rollers before any thing of this kind was mixed with it?

A. That is impossible for me to tell.

Q. More than one?

A. I should think a great many times—though I am not able to say; it depends upon the temperature of the rollers and the condition of the rubber partially.

Q. Have you any further explanations to make of the grinding machines?

A. I do not think of any thing further that I was called there for.

Q. Will you give a description of the spreading machine as stated to you by the Dr.?

A. This is as simple as the other portion of it is.

Q. What was it?

A. I did not take sufficient interest to inquire. I saw that the object of my visit was attained, and hence I went no further; but the process of spreading the rubber upon the cloth is common. There are two different conditions; one is for lining stiffeners, and strengthening articles to be manufactured, and the other is to run into a sheet, exclusive of the cloth itself. It is run into a sheet for shoes—the rubber by itself is intended to be taken off of the cloth or apron, as it is termed, and run through calenders. They do not have any friction. Where the cloth is coated for stays it is put on the friction roller to press it, and, as it is termed, to clinch it with the meshes of the cloth. Both of these Dr. Hartshorn explained, and I had no reason to doubt his word.

Q. Have you ever been in the factory since?

A. No, sir.

Q. Have you been by there?

A. Yes, sir.

Q. Have you seen the factory in operation?

A. I have the external evidence of it.

Cross-examined by Mr. Bradley.

Q. Who did you see when you went there?

A. Messrs. Chaffee, Babcock and Richardson.

Q. Did Dr. Hartshorn make any objection, or throw any obstacles in the way of a thorough examination?

A. He did; he made objections to having Chaffee and myself go into his establishment.

Q. Because you were engaged in the rubber manufacture?

A. No, sir; that was not the objection expressed.

Q. State what the reasons were.

A. From the past history in reference to Dr. Hartshorn and the party with which I was concerned, he could not feel that I could be a disinterested witness to the operations in his factory.

Q. It was a personal objection to you on account of your connections?

A. Theretofore.

Q. Did he make any objection to the examination of his machinery by Mr. Richardson, or the parties that were interested adverse to them?

A. The only objection I heard made was, the ground I have spoken of.

Q. But to Mr. Richardson and others he showed his machinery freely?

A. I understood that Richardson had been there before me, and what the interview was between them I do not know; but while I was present the objection was made as I have stated.

Q. He objected to you for that reason?

A. He gave to Mr. Richardson that reason.

Q. Was the objection waived by him?

A. On explanation that I made, by myself, to him, I rather think, at least I rather thought that he did not object to my going.

Q. Did you make such explanation?

A. I made an explanation of my feelings in regard to the business and the history of the intercourse between us.

Q. After that you were admitted freely?

A. Yes, sir, and attended to very courteously.

Q. Now are you able to state what this liquid you saw poured in was?

A. I stated that I knew not what it was; hence I am not able to state what it was.

Q. You know what it was said to be?

A. I do not, otherwise than it was said to be a powerful solvent.

Q. You recollect whether it was or was not coal tar?

A. No, sir; I recollect no description of what it was composed of, only the question was asked whether I knew what it was; I replied, no. Well, it is one of the most powerful solvents known, was the answer. That is all that I recollect of the conversation in regard to the liquid.

Q. Do you know coal tar?

A. I have some little knowledge of it—no practical knowledge of it.

Q. Do you recollect whether it was or not?

A. I have stated that I do not know what it was. If I were to say what I imagined it to be, you might object to it as being no evidence. I think I know what it was—but still, as long as it is simply my thoughts, you would not regard it as testimony or admissible, and hence I would not offer it.

Q. We can prove it otherwise. You saw this machinery—two calenders of unequal motion?

A. In some.

Q. Heated by steam?

A. Or otherwise.

Q. How do you mean otherwise?

A. The friction with the rubber itself will, in a short time, produce as great heat as steam will; but it may be proper for me to add that without that steam or some other heat, you could not begin to work the rubber.

Q. How many minutes does it take to revolve these calenders to generate heat?

A. If I refer to my own practice it has been from thirty minutes to two or three hours. That will depend upon the state of the rubber.

Q. Were these calenders all provided with a cooling apparatus?

A. They were so far as I observed. I think that one or two were not; still it would be a matter of very little consequence, in my opinion, for the object for which I went, to know that they were provided with a heating apparatus or not.

Q. You have stated that there was something called a solvent that you took to be coloring matter; that was liquid?

A. Yes, sir.

Q. Did you see anything else put in?

A. I do not recollect anything. What I termed coloring matter I could not deem a solvent, because, applied to the rubber and the rollers, from the evaporation, it would have been of no effect in dissolving the rubber, in my opinion; hence I looked upon it as coloring matter, although my attention was called to its being a great solvent.

Q. Do you or not know in point of fact, that in connection with that rubber they used other materials?

A. I know by the detailed specification of various India rubber patents, that there are other articles used, but from what I saw there I have no means of saying whether there was anything other than India rubber, for I saw none.

Q. You don't mean to say you have any doubt that in that factory they used vulcanized materials?

A. I would not have my testimony understood anything otherwise than as I stated it.

Q. I ask you another and a fair question. You know whether you wish the jury to understand whether you have any doubt about the fact, in relation to these vulcanized materials?

A. It is no object for me to ask them to take my opinion. I would not quibble upon this question, Mr. Bradley, at all, I simply state the facts as I saw them, and am required to state them. That there were other articles used in the rubber, to answer your question, to you, I have no doubt. I do not answer to the jury however, for I believe they do not require it.

Q. Perhaps you are not a judge of what they require; you will answer to me and that will be enough. What kind of machinery did you use when you first commenced the rubber manufacture?

A. In principle, about the same.

Q. When did you commence?

A. In 1839.

Q. You say you have used machinery substantially like this you have seen at the Doctor's?

A. I mean to be understood to say that I saw the rubber worked, without a solvent, with machinery running—

Q. My question is, in 1839, in your own business?

A. Machinery that ran without friction, and with friction, being heated by steam.

Q. And two calenders?

A. Yes, Sir.

Q. Who built them for you?

A. A portion was built by the Franklin Foundry Iron Co., a portion by Frederick Fuller, a portion by the High Street Machine Co., and others.

Q. Did you know Chaffee at that time?

A. Only by report.

Q. Did you have a license of Chaffee to use the machinery?

A. No, Sir.

Q. Did you have a license from anybody?

A. No, Sir.

Q. That machinery was substantially the same as used by Dr. Hartshorn?

A. The principle and object was the same as used by Dr. Hartshorn, and I may add, by all those who have embarked in the India rubber business.

Q. Did Dr. Hartshorn ever buy any machines of you?

A. Yes, Sir.

Q. The same that you have described?

A. Yes, Sir—that I have worked on.

Q. When did you cease to use them?

A. It was terminated by the Dr. himself in 1848 or 9.

Direct resumed, by Mr. Richardson.

Q. Was this liquid or coloring matter used on more than two of these grinding machines, when you were there?

A. Yes, Sir, I believe it was. I do not, however, recollect distinctly about that, it was a minor consideration.

Q. Were not some running without, and some with it?

A. Yes, Sir.

Q. (By Mr. BRADLEY.) I believe you stated that this machinery was used everywhere; did you ever hear of anybody being sued for the use of it?

Objected to by Mr. Richardson.

Objection allowed.

CYRIL BABCOCK, SWORN AND EXAMINED BY MR JENOKES.

- Q. Where do you reside?
 A. In this city.
 Q. What is your occupation?
 A. A machinist.
 Q. What establishment are you connected with?
 A. The Franklin Foundry Machine Co.
 Q. In what capacity?
 A. I have hitherto acted as agent for that company.
 Q. How long have you been engaged in building machinery?
 A. Since 1880, in fact I commenced in 1821 learning the business.
 Q. Are you acquainted with the defendants?
 A. Somewhat.
 Q. Did you ever visit their factory?
 A. Once only.
 Q. When was that?
 A. I think it was early in the fall of 1888.
 Q. Can you fix the date?
 A. I cannot precisely; I think, the 1st of August, however.
 Q. Near the time when you gave an affidavit?
 A. The day previous.
 Q. (The affidavit is dated the 2d of August.) Who went with you to the factory?
 A. Messrs. Ware, Hartshorn, and Richardson.
 Q. Did you examine the process of grinding and preparing the India rubber used in that factory?
 A. I examined the grinding particularly, and I saw the other machines.
 Q. Have you ever examined the specification and drawings of Chaffee's patent?
 A. Yes, Sir.
 Q. Did you before you went into the factory or since?
 A. I did.
 Q. How long before?
 A. A short time, I do not recollect how long exactly.
 Q. Did you understand the process, and apparatus there described?
 A. So far as the grinding machines I did.
 Q. Tell us what you saw in the factory of the defendants?
 A. I saw a number of grinding machines—I think nine—said to be used for that purpose, and also three other machines, one called a spreader, one a calender, and the other I do not recollect particularly.
 Q. Describe the construction and operation of the grinding machines?
 A. The grinding machines consisted of two rollers, one above the other, geared in such a manner that one should run faster than the other, thereby producing a rotary sliding motion.
 Q. State whether or not the construction and operation of these grinding machines were substantially the same as that described in Chaffee's patent?
 A. I at the time decided in my own mind that they were. There was, however, a difference in the construction of the two machines in some points. In Chaffee's machine I understood one of the rollers was made larger than the other, but in the Doctor's both were the same size. That would produce this rotary motion, the gears being the same; in the others, the gears were different in order to produce the same motion.
 Q. It would produce the same effect to alter the gearing in one case, and the size of the rollers in the other?
 A. Yes, sir.
 Q. Were these heated by steam?
 A. A part if not all of them—I am not positive about that now.

Cross-examined by Mr. Bradley.

Q. I think you stated that you had been learning this business of a machinist since 1821; when were you first acquainted with the use of cylinders heated by steam, revolving upon one another with an unequal motion?

A. I could not tell the time.

Q. As near as you can?

A. Probably 1836.

Q. You think you never knew cylinders heated by steam before that?

A. I might, but I cannot be positive about it.

Q. Have you any means by which you could fix it more definitely than this?

A. No, sir.

Q. What were they used for at that time?

A. For calendering and coating cloth.

Q. Do you know how early they were used for that purpose?

A. No, sir; I could not tell.

Q. You said you understood the specifications, so far as the grinding machines were concerned; what did you mean by that remark?—that the other part of the description you could not understand?

A. My attention was more particularly called to that point; and the fact itself being very simple it rested upon my mind, and I recollected it well; but upon the other point, it is so long ago that I could not state it very correctly.

Q. Do you recollect whether there was any cooling process, described in these cylinders?

A. No, sir; there were one or two machines running with the coloring or a solvent.

The COURT. You speak now of the specifications?

MR. BRADLEY. Yes, sir,

Witness, Cooling process? I do not recollect that term.

Q. In the method described for cooling?

A. I do not now recollect.

The COURT. They speak for themselves.

MR. BRADLEY. I was asking the only witness they have who has read the specifications, whether it is substantially the same as the Chaffee patent, and he said he understood one part. Now I am simply inquiring what is his intelligence upon that point, to see how far his opinion is of weight with the jury.

Witness. I simply said that at the time I understood it to be the same.

Q. But the grounds of that opinion you cannot recollect? You do not recollect whether there was any provision for cooling?

A. I am not sure.

Q. Any thing said about this black liquid?

A. Some remarks were made about it; there were only one or two machines using it. I think there was something said about a solvent in the specifications; still I could not say positively about that now.

Q. Do you recollect whether it describes one machine or two?

A. I think the description is of two; still my attention was called to only one very particularly at the time.

Q. Was there any thing in these specifications to instruct a workman how to heat the cylinders?

A. I do not recollect that there was.

(Objected to by Mr. Jenckes.)

Direct resumed by Mr. Richardson.

Q. Was there not strong objection made to our seeing the machinery at that time?

A. There was objection made when we went there by Hayward.

Q. How long did we wait before we could get into the factory?

A. I think an hour or more.

Q. What did Dr. Hartshorn say about advising with his counsel, and what his counsel told him?

A. I do not recollect that particularly. There was something said, but I did not charge my mind with it.

Q. Do you recollect whether it took a great deal of time before we could get in.

A. Yes, sir; there was objection made to Chaffee.

Q. Was not Chaffee entirely excluded from seeing it?

A. Yes, sir.

Q. Prohibited from going there by Hartshorn?

A. He was.

Q. Did he go in at all?

A. No, sir; he was refused. Mr. Ware had the privilege of going in after some conversation—no objection to myself.

Q. Was that consent given you in the onset before any objection was made to me?

A. Consent was given to me as the last one.

Q. How long was I talking with the Doctor to induce him to let us in?

A. Some time; I do not recollect.

Q. Did he not make objections, and were not reasons urged to induce us to go in?

A. Mr. Hayward objected decidedly before Dr. Hartshorn came.

Q. How did the Doctor take it in the onset?—not after I had given him the reasons, and told him what the effect of it would be if he refused.

A. I considered it a decided unwillingness at first.

Mr. RICHARDSON. Yes, sir; so did I. I don't care any thing about that point, but I thought the counsel wanted to press it rather too hard.

Re-cross-examined by Mr. Bradley.

Q. Why was Chaffee not allowed to go in? Was not the reason given that he was engaged in some rubber manufacture, and the Doctor did not wish him to see the process?

A. I do not know; perhaps that was the difficulty. I suspect it was something of that nature—I do not know what it was.

Q. Was there any objection to your going in?

A. No, sir.

Q. Was Mr. Richardson known to be counsel opposed to Dr. Hartshorn and Hayward?

A. I do not know; it was the first time I had seen Mr. Richardson.

Q. Had he given them notice of his coming there?

A. I do not know.

Q. Did Dr. Hartshorn say he wanted to see his own counsel?

A. I do not recollect.

EBENEZER B. SCOTT SWORN AND EXAMINED BY MR.
JENCKES.

- Q. Where do you reside?
A. In Roxbury.
Q. What is your business?
A. Plumbing.
Q. Were you ever in the India rubber business?
A. I was.
Q. When?
A. In 1834 or 1835.
Q. Where?
A. At Roxbury.
Q. What factory?
A. The Roxbury India rubber factory.
Q. In what capacity were you employed?
A. As machinist.
Q. For how many years?
A. About three, I think.
Q. Were you acquainted with the processes for preparing India rubber in that factory?
A. Not much about the old process.
Q. What do you mean by the old process?
A. Before Chaffee gave up his new process.
Q. What do you know of the old process?
A. I know we used a solvent.
Q. What did they use?
A. Rectified spirits of turpentine.
Q. How was it used?
A. It was dissolved by mixing the spirits with the India rubber till it became soft, in order to grind it.
Q. How soft was it made?
A. As soft as molasses—not quite.
Q. How large were the pieces of India rubber put into the solvent?
A. Strips about the size of your finger.
Q. What size was the vessel that held the solvent?
A. The spirits were put into barrels—the solvent with the rubber.
Q. How long did the rubber remain in the spirits?
A. I do not know.
Q. About how long?—days, or weeks?
A. Days.
Q. How was the rubber spread on the material with which it was to be combined—with the cloth and other articles?
A. It was scraped on by the scraping process.
Q. How was the solvent removed from the cloth?
A. By drying.
Q. Are you acquainted with the use of Chaffee's invention?
A. I am.
Q. Do you know what degree of saving was effected by it over the old process?
A. I am not sure what was the saving, but it saved the spirits.
Q. Do you know whether or not the fabric was better than that made by the old process?
A. It was.
Q. How is it about the quantity of labor required—more or less, with the Chaffee machine?
A. Less, I should think.

Q. Do you know what quantity of solvent was used at that factory?

A. I do not.

Q. How much was used to a pound of rubber?

A. I do not know.

Q. Do you know about how much?

A. I do not.

Q. Did you ever make any estimate of the degree of saving?

A. I did not.

Cross-examined by Mr. Bradley.

Q. Were you connected with the Roxbury Rubber Company, or not?

A. I was.

Q. As a stockholder?

A. I was not.

Q. You were employed?

A. I was.

Q. What became of that Roxbury establishment?

A. I could not say.

(Objected to by Mr. JENCKES, as a new inquiry, and improper; objection sustained.)

Q. What was the capital of that Company?

A. I understood, \$300,000.

Q. Do you know of their having buried large quantities of goods, and of large quantities being made that were unfit for market?

A. There were large quantities buried.

Q. Can you give the jury an idea of the value of them?

A. I could not—thousands of dollars.

Q. To the value of \$50,000?

A. I think there might be.

Q. What was the trouble with them?

A. It was owing to bad solvents used for their goods. That was before the Chaffee patent.

Q. When they got that patent, did they bury goods?

A. They did not.

Q. Did they fail after that?

A. They stopped business.

Q. Stopped why?

A. I do not know why they stopped.

Q. Were not the goods, after they got the Chaffee patent, unsaleable?

A. Not that I know of.

Q. Did they prosecute the business, or give it up?

A. I do not know any further, than that the mill stopped for a time.

Q. Do you know what became of this Chaffee machine?—the monster machine—how much it cost?

A. I am not sure.

Q. Didn't it cost something like \$50,000?

A. Not so much.

Q. How much did it?

A. Eight or ten thousand, as I understood.

Q. What became of it?

A. It was sold.

Q. What was it sold for?

A. I do not know.

Q. Was it sold at auction?

A. I do not know.

Q. Do you know what became of it?

A. I do.

Q. What was done with it?

A. I understood Mr. Haskins bought it, and took it from one factory to the other.

Q. What became of it?

A. It is there now.

Q. Was Chaffee in the employment of the Roxbury Company at the time it failed?

A. I believe he was.

Adjourned.

SECOND DAY.

PROVIDENCE, *Thurs., Jan. 25, 1855.*TESTIMONY OF STODDARD, MARING, HARRIS, AND SEAV-
ERNS.NATHANIEL W. STODDARD SWORN AND EXAMINED BY
MR. JENCKES.

- Q. Where do you reside?
 A. In Woburn.
 Q. Have you ever been connected with the India rubber business?
 A. I have.
 Q. When were you first engaged in that business?
 A. In 1834.
 Q. Where?
 A. In Roxbury.
 Q. What factory?
 A. The Roxbury India rubber factory.
 Q. How long were you employed there?
 A. Something over a year.
 Q. In what capacity were you employed?
 A. As overseer in the shoe department.
 Q. How long were you engaged in that business when you left that factory?
 A. About two years.
 Q. Whereabouts?
 A. First in Lynn, and afterwards in North Bridgewater.
 Q. Did you have any thing to do with getting up factories?
 A. I did.
 Q. What factories?
 A. The Pitt street factory in Boston; the factory for the Lynn Printing Company, in Lynn, and the factory in North Bridgewater.
 Q. (By the Court.) These are all rubber factories?
 A. All rubber factories.
 Q. Were you acquainted with the various processes in the manufacture of India rubber in 1834 and '35?
 A. I suppose at the time that I was well acquainted with it.
 Q. Have you any doubt but what you were fully acquainted with it?
 A. I have no doubt.
 Q. Will you describe the process that was used in the Roxbury and other factories for preparing the rubber?
 A. It was prepared by a solvent; spirits of turpentine was the ingredient used as a solvent.
 Q. Do you speak of the Roxbury, or all the factories?
 A. All the factories.
 Q. What quantities of solvents were used in proportion to a given weight of rubber?
 A. From three to four quarts to a pound.
 Q. In what state was the rubber used when put into the solvent?
 A. What I used was principally in the form of rubber shoes.

Q. I mean before it was dissolved?

A. That is before it was dissolved, as imported. Also, in bottles.

Q. Had it undergone any purification before dissolving?

A. Not at all.

Q. What sized pieces?

A. We generally cut them up into pieces varying from two to three inches square; in thickness, from an eighth to a quarter of an inch.

Q. Was it washed before dissolving?

A. It was.

Q. When was it weighed, before or after it was washed?

A. After it was washed.

Q. Go on and describe the process after it was put into the solvent.

A. We generally put it into a large tin can holding perhaps half a barrel, weighing it out in that way, and then turning the spirits on in the right proportion, letting it remain until it became pulpy and soft.

Q. How long?

A. It would take from two to three days, sometimes longer. It was taken from that and pulverized as much as possible in the cans before taking it out.

Q. How was it spread upon the cloth and worked into articles?

A. It was necessary to grind it and make it into a composition, a fine powder, before it was applied to the cloth.

Q. How was that done?

A. In a mill. Most manufacturers at that time used a large sized paint mill. Not at Roxbury, however; they had another kind of mill.

Q. What then?

A. It was then ground fine and applied to the cloth by means of a machine. The machine used in Roxbury was what was termed an endless-web machine, made of wood.

Q. Could you give a description of that machine?

A. It consisted simply of two rollers four feet long, one placed at the further end of the web, which would be 15 yards, another at the end where worked a straight bed. The cloth went up over the roller on to the bed, and then a knife, called the doctor, which was mounted by a set of screws or other means, laid upon the bed, and the movement at the further end drew the cloth through and coated it.

Q. Was it necessary or not to expel the solvent from the fabric when completed?

A. It was. That was done in a different manner.

Q. Why was it necessary to do it?

A. Because it was necessary to have it dry; it was so sticky that you could do nothing with it unless it was perfectly dry, or as dry as it could possibly be got.

Q. Are you acquainted with the process for preparing India rubber patented by Chaffee?

A. Somewhat.

Q. Do you know whether or not this effected any saving over the processes you have described?

A. It did—a great saving.

Q. State from your knowledge how much that saving was.

A. It would be rather difficult to state it without the aid of figures. It certainly saved the solvent.

Q. What was that worth for every pound of rubber?

A. At that time, 1884–85, I paid 70 to 80 cents a gallon.

Q. How much did it cost to dissolve every pound of rubber?

A. It always exceeded a gallon to a pound, I think, in the end. We generally put from three to four quarts when we put it into the cans, and then we frequently had to add more in the process of grinding and applying it to the cloth.

Q. Were there any other elements of saving?

A. I think the saving of labor must have been quite an item; the saving, also, of buildings necessary to carry on the business was an item.

Q. How was it with the quality of the goods?

A. There was a great difference in the quality of the goods; we always had much difficulty under the old business.

Q. Tell us what that difficulty was?

A. It was from the decomposition of the materials; perhaps you might say the rotting of the rubber.

Q. Was there any of that in the new process?

A. Not that I ever heard.

Q. What was the cause of the rotting in that process?

A. Probably the principal cause was the sediment of the solvent that remained in the composition; it did not dry out. That was probably the most active agent, perhaps the only one.

Q. Can you state any sum per pound of saving between the new process and the old?

A. I could state positively as to the 80 cents a pound on the solvent; then, as to the saving of labor by the new process, I am not so well acquainted, having never operated a factory with these machines, and I could only know, perhaps, what Mr. Chaffee informed me.

Q. That you need not state.

A. I would state, from what I have seen of the operation of these machines, that the saving of labor must have been quite an item over the old process.

Q. Do you know what the solvents are worth at the present time?

A. Good camphene is worth \$2½ cents at retail.

Q. Spirits of turpentine?

A. Three or four cents less; it is the same thing, only the camphene is purer.

Q. Are you now engaged in the manufacture of India rubber?

A. I am not.

Q. What is your business now?

A. I have been engaged, for the last seven or eight years, in the patent leather business.

Q. Do you use India rubber in that manufacture?

A. I do.

Q. State whether or not the same saving would be effected now in the manufacture of India rubber shoes, such as they now make, as there was in 1836?

A. I think not.

Q. What would be the difference?

A. The rubber being so high now, it would make a difference.

Q. With regard to the cost of materials, would it make any difference in the actual saving?

A. Do you mean in the cost of getting up the shoes?

Q. The cost of manufacture, leaving out the cost of the raw material?

A. The cost of manufacture must be reduced 50 per cent. from the old way.

Q. Is that cost reduced by this process of Chaffee, or otherwise?

A. That would be the principal cost, and the facilities for manufacturing.

Q. You include that in the estimate of the reduction?

A. That must be the principal cost.

Q. Suppose the Chaffee process is not used, would the cost of the manufacture of rubber materially differ now from what it was in 1836?

A. I think it would not essentially, although the rubber costs much more by the pound than it did then.

Q. I am speaking of the cost of manufacturing alone—not of the manufactured product—of the manufacture of the raw material; would it be less than in 1836?

A. I think it would.

Q. Leaving out the Chaffee patent, and supposing they used a solvent, as they did then?

A. In that case I think the cost would be enhanced, it would be more.

Q. Do you know whether or not the goods now manufactured could be made by the use of a solvent, and be a merchantable article?

A. I do not fully understand your question.

Q. Could the article of shoes, as now manufactured, be made as a merchantable article by using solvents?

A. It could not be done at all.

Q. Do you know any other mode in which they could be made a merchantable article, except by the Chaffee process?

A. I do not, at present.

Cross-examined by Mr. Bradley.

Q. You said that at Roxbury and other places they used a gallon of spirits of turpentine to a pound of rubber?

A. Yes, sir.

Q. You said something about grinding the rubber; what was that done with?

A. That was a wooden cylinder lined with wire; something like wire sieves.

Q. Lined on the inside or outside?

A. On the inside, with a shaft in the centre turned smooth, and bearing upon the wire, a follower at the top which pressed it through the mill when the shaft was in motion. That was one kind used.

Q. What other mode was used?

A. There was another very similar process, only the wire was across the top, and one set attached to a tub, and another set attached to the shaft, and then set in motion and pressed through in another manner, which was considered much better.

Q. What other modes were there, to your knowledge?

A. Another at Pitt street, at Lynn, and perhaps at South Boston,—they used large size paint mills.

Q. Please tell us how they were made?

A. They were made with a plate at the bottom; the bottom plate concave and the top plate convex, smooth at the edges, but grooved near the centre, and turned by a gearing process, the same, or nearly the same, as the present paint mill, only much larger.

Q. That is, a convex and concave surface fitting into each other?

A. Yes, sir; that was the one I saw; they might not all have been made so, because some of them I only looked at outside; the one I had myself used was made as I described, convex at the bottom and concave on the top, turning on one another.

Q. Do you know of their grinding rubber through cylinders revolving upon one another?

A. At that time there was none in Massachusetts, unless it was some small private affair; no factory running in that manner.

Q. After the rubber had been dissolved it had to be ground by some process or other, as you have stated, and I think you have described fully the mode in which the rubber, after being ground, was put upon the cloth?

A. That varied in different establishments.

Q. Suppose you give the different modes.

A. The one, I have described was used in Roxbury, and it was the one I used myself, because I had models of all those machines. The one in Pitt street factory was somewhat different. They had at the further end a cylinder made of some metallic substance, either iron or copper. I do not recollect which. That was heated by steam—and used for the purpose of evaporating the solvent—drying it. The head of the machine, the one that I saw, was very similar to the other that I described..

Q. Was there more than one roller?

A. I think there were two rollers to that one, in front.

Q. Near together?

A. One at the head of the machine and the other back of it—a bed upon the top. This one being somewhat larger, the cloth rested upon this (referring to the model), and this rolled over the bed.

- Q. There were two at Pitt street and one at Roxbury?
 A. Two at Roxbury and three at Pitt street.
 Q. That is the spreading machine you are speaking of? You are not at present engaged in the India-rubber business?
 A. I am not.
 Q. And have not been for many years? What year were you engaged?
 A. From 1834 to 1837.
 Q. You have spoken of several factories at Pitt street, South Boston, Roxbury, North Bridgewater, when did they cease operation?
 A. The one in Pitt street commenced in the spring of 1834; it was burned, I think, in the spring of 1835.
 Q. How with the others?
 A. The Lynn factory, where I was engaged, I left in the spring of 1835. That ran until the summer of 1836. The South Boston factory commenced in the winter of 1835. I do not recollect when it ceased operation.
 Q. Tell the jury as near as you can.
 A. All these factories ceased as soon as they were thoroughly convinced that Mr. Chaffee's machine was in operation, so far as my knowledge extends, because they did not dare to run.
 Q. Did the Roxbury company cease operation?
 A. Not at that time.
 Q. How soon did it?
 A. That, I think, was in 1837.
 Q. Did all the concerns cease operation as early as 1837, in the vicinity of Boston? (What the cause was I will ask another time.)
 A. I am not positive as to South Boston and Salem.
 Q. Give the best of your knowledge whether there were any of these factories in operation, say in 1838.
 A. I am positive as to Pitt street, Salem, and Lynn.
 Q. They were not?
 A. They were not.
 Q. Are you not positive as to the Roxbury factory also?
 A. I am not. They failed in 1837. How long they might have operated after the failure I do not recollect.
 Q. I ask you whether there was any India-rubber factory in operation in 1838?
 A. I could not say.
 Q. Having been in the India-rubber business then, was any single one in operation?
 A. I could not say positively. There was none in operation in Massachusetts at that time.
 Q. To the extent of your knowledge was there any?
 A. None to my knowledge.
 Q. Was there any in the United States to your knowledge?
 A. I presume so.
 Q. I ask for facts, not opinions.
 A. I spoke as to the others positively, having seen them in operation.
 Q. You mean to say, you do not know that there was any rubber factory in operation at this time?
 A. I have a very strong conviction that there was, yet I did not see them.
 Q. Where were they, according to your presumption?
 A. One in New York, as I heard.
 Q. Whose was it?
 A. I knew the gentleman, but I cannot think of his name.
 Q. Was it Smith or Goodyear?
 A. No, sir; I cannot think of the name.
 Q. What other was there?
 A. I don't think I heard of any other. I was out of the business entirely.
 Q. You went out of business when?
 A. In 1838.

Q. Were you ever at work in Pitt street?

A. I sold them a receipt for making the composition; I was there merely to show them about the composition.

Q. How much solvent did they use in Pitt street?

A. My receipt directed them to use 3 quarts.

Q. How much did they use in point of fact you do not know?

A. They told me that that would not do it.

Q. That is not evidence.

A. I know that it took 4 quarts to the pound.

Q. At Pitt street?

A. At Pitt street, in the summer and fall of 1835; I was there and helped them to do it.

Direct resumed by Mr. Richardson.

Q. You said the Pitt street factory was burnt in the spring of 1835; are you correct as to that?

A. It commenced in 1835, and was burnt in the spring of 1836. I did not mean to state that it was burnt in 1836.

Q. Was it after you left Roxbury that you went to Pitt street?

A. I was at Roxbury at the same time, at both places.

Q. Was not the Pitt street factory started in the spring of 1835?

A. It was.

Q. What was the object of putting the rubber into the sieve you spoke of; was it to mix or grind it?

A. To grind it; it could not be used without.

Q. What do you understand by grinding?

A. Pulverize, and make it free from all lumps.

Q. And make it of a uniform consistency?

A. Yes, sir.

Q. Was there any force applied to it, to grind the raw material, or only the compound?

A. It required force to grind the rubber itself, but it was pulpy, soft.

Q. (Showing him a jar of dissolved rubber.) Is this dissolved rubber?

A. I should call this the old composition, such as I have been speaking of.

Q. That is the pulpy material you spoke of?

A. I should think it was.

Q. Dissolved by spirits turpentine?

A. Yes, sir.

LEONARD S. MARING, SWORN AND EXAMINED BY MR.
JENCKES.

Q. Have you ever been engaged in the India-rubber business?

A. I have, some.

Q. When?

A. I believe I commenced operations, experimenting with rubber, as early as 1832. I cannot say I was engaged in the regular manufacture till 1834.

Q. How long were you engaged in it?

A. From that time till the last part of 1849.

Q. Were you acquainted with the process used for preparing rubber previous to 1836 and '7?

A. Partially, but that was not my business particularly, so that I am not so familiar with some portions of the operation as others. I was in the habit of seeing it done, and know something about it.

Q. What part of the business were you engaged in?

A. In manufacturing articles after the cloth was made—in cutting and putting the cloth together for shoes principally.

Q. Were you acquainted with the Chaffee process of preparing rubber?

A. I was, somewhat.

Q. Was there any saving effected by that process over the former mode?

A. It was so considered—to a great extent.

Q. What degree of saving?

A. There was no solvent used at all by the machine used in the operation; whatever the solvents were worth would certainly be so much saving. From my own experiments, I considered a gallon of turpentine or camphene would fall short of sufficient. We did not then know so much about camphene. We did not know what was poor enough to put into the rubber to save it from decaying. I should think, as a general thing, a gallon and a quart would come nearer to it.

Q. For what?

A. To put it in a condition to be put upon the cloth. Perhaps a gallon and a pint would do—I do not think a gallon would do it.

Q. In what state was the rubber when the solvent was applied?

A. It was applied to it in its original state, as it was imported. Sometimes it came in shoes, sometimes in the form of a bag or bottle. We generally know it by the name of bottles. That was cut into small pieces—irregular pieces and soaked; after remaining in these solvents, to be softened somewhat, it was then taken into any process that would crush it, or stir it, and make it a complete pulp.

Q. State whether the saving was more or less than 50 cents a pound for every pound of rubber?

A. I may not be sufficiently familiar with the cost of running the different machines to be very accurate about it, but my impression is that 50 cents a pound would be under the amount that would be saved. But I would not state that positively, because I have no positive statistics to go by at this time.

Q. Do you know any thing about the cost of manufacturing India-rubber shoes at the present time?

A. I do not.

MR. STODDARD RECALLED AND EXAMINED BY MR. JENCKES.

Q. Have you seen the process used in the defendants' factory for preparing rubber?

A. I have, I saw it yesterday.

Q. How many machines did you see?

A. Ten or twelve grinders.

Q. How many spreaders?

A. I saw but one; I did not go into the cutting-room.

Q. You saw them in operation?

A. I saw the grinders in operation—most of them.

Q. Have you examined the specifications and drawings of Chaffee's patent?

A. Only partially.

Q. Are you acquainted with the machines?

A. I am with the machines more than with the specifications.

Q. And with the process used?

A. I am.

Q. State whether or not these machines, and this process you saw in the defendants' factory were substantially the same as those patented by Chaffee?

A. Precisely, so far as I could discover as to any essential difference.

Cross-examined, by Mr. Bradley.

Q. I understand you to say you examined the specification personally?

A. Merely read it.

LEMUEL HARRIS, SWORN AND EXAMINED BY MR. JENCKES.

Q. What is your occupation?

A. A machinist.

Q. Have you been in the employment of Hartshorn & Co.?

A. I have.

Q. Are you in their employment now?

A. I am.

Q. State the number of machines in the defendants' factory?

A. I do not know that I could state the exact number.

Mr. BRADLEY. We will give you the number.

Mr. JENCKES. Very well; nothing further.

Mr. BRADLEY opened on the part of the Defence.

JOHN S. SEAVERNS, SWORN AND EXAMINED BY
MR. BRADLEY.

Q. State your residence and occupation.

A. I live in Boston now; I am a builder of machinery.

Q. How many years have you been in that business?

A. A builder for 9 or 10 years; in the business about 20.

Q. Have you ever known, and if so when, for the first and earliest, the use of hollow metal cylinders?

(Objected to. Counsel for plaintiff wishes to know the object of the testimony.)

Mr. BRADLEY stated that they expected to prove that the use of heated cylinders, and of the rolling and slipping motion, was long prior to this invention.

Mr. JENCKES. Do you expect to prove that these heated cylinders were known as applicable to India rubber?

Mr. BRADLEY. Not now.

Question allowed for the purpose of seeing whether this is a patentable invention.

Further objection made to going into the question of invalidity.

Question repeated to witness.

A. The first knowledge I have of cylinders having steam introduced, was the use of rollers for the manufacture of paper, which is as long ago as 1838, and previous to that time for calender purposes.

Mr. JENCKES. State as to your knowledge.

A. Yes, sir; I have been a paper maker before I was a machinist, and consequently I had an opportunity to see every thing that was used in the manufacture.

Q. (By the Court.) What effect was produced?

A. The object was, to produce a good surface. They had to heat it to various temperatures to produce this result.

Q. You see this little machine; were they put together like that, with two cylinders, or more than two?

A. They were put together in sets or stacks of two, and as many as six. They have been used differently in sets of five geared together, and steam admitted into all—in sets lying down, three in a row, and two on top—a small friction roller at the end of the machine. That produced a more beautiful finish.

Q. You say various numbers of rollers—two, three, five?

A. Yes, sir.

Q. What was rolled between them?

A. Paper.

Q. And the material of which paper is made?

A. No.

Q. In what stage was it put in?

A. It was in the wool manufacture. It was the dried sheet, and partially dried, a little more than half way down the drier, and after that the calender, that produced the finish.

Q. Were these in use in paper-mills in 1838, and anterior? if so, how long?

A. The machinery was not very common for manufacturing paper as long ago as that, but whenever any thing of the kind occurred, the others used it very quick—it was common property among machinists and manufacturers. I went to making them as soon as I went to doing any thing in the business.

Q. Are you aware whether these rollers were used to get the pulpy matter into sheets?

A. No, sir; they were not used to my knowledge.

Q. You have seen the specification of the Chaffee patent?

A. No, sir; I have not.

Q. You have not examined the specification?

A. I believe I examined it; I do not recollect that I have seen the drawings.

Q. The drawings are annexed to the specification. Are these rollers, as described in that specification, the same kind of rollers that you used in your paper-mill, and the mode of their action one upon the other?

(Objected to.)

Q. Describe the mode in which these calenders were geared—whether they were hollow, and how they were adjusted to one another.

A. Here are three figures. One figure I do not remember myself. I know of a finishing calender having been got up, but did not work well. But this is a common mill. The first application in the manufacture of paper was in that form.

(Adjourned.)

THIRD DAY.

PROVIDENCE, *Friday, Jan. 26, 1855.*

TESTIMONY OF SEAVERNS AND WALDRON.

MR. SEAVERNS CONTINUED BY MR. BRADLEY.

Q. I asked you if you had read the specifications, and examined the drawings of this Chaffee patent?

A. I have.

Q. Have you done so heretofore, before you came into this court as a witness?

A. I looked at them last summer.

Q. You have been engaged in the business of constructing machinery how long?

A. About twenty years.

Q. Are you owning or conducting a machinery establishment?

A. Yes, sir.

Q. And have been for how many years?

A. It is about nine years since I had the management.

Q. Before you went into the machinery business, were you engaged in a paper-mill?

A. Yes, sir.

Q. How far was the machinery used in paper-mills in 1832, or thereabouts, similar to or substantially the same as that used by Chaffee?

(Objected to as too general.)

Q. You will speak of the machinery as described yesterday, as used by you and to your knowledge in paper-mills; you will be kind enough to compare that machinery with this Chaffee specification.

(Objected to as going into the question of validity, the defendants being estopped upon the record. Objection also taken on account of insufficiency of notice. Question argued; decision reserved till to-morrow. Defendants directed to proceed to the other part of their defence in the mean time.)

Mr. BRADLEY offered the original parchment of the Chaffee patent [A].

Also, the agreement to assign by Chaffee to the Roxbury Co. [B], March 23, 1834.

(Objected to, unless properly proved.)

Also, the assignment itself, Sept. 8, 1836 (C).

(Objected to as irrelevant.)

Also, the original record of the officers of this corporation, containing their note, Jan. 24, 1847, directing the sale of property of the corporation [D].

(Objected to.)

Also, a paper of May 24, 1837, from the Roxbury Co., appointing trustees for purchasing the effects of the corporation [E].

(Objected to.)

Also, a certified copy from the Patent Office, of the deposition of Edwin N. Chaffee, on application for the extension of his patent.

(Objected to as not evidence; objection sustained.)

Next, a notice signed by Mr. Chaffee, witnessed by Mr. Jenckes, with two papers annexed to it [F], to prove that Chaffee revoked his agreement with Judson, for no other reason than an alleged failure on Judson's part to perform his agreement.

(Objected to; papers allowed to be presented and proved by witnesses.)

JAMES WALDRON EXAMINED BY MR. BRADY.

- Q. What was your occupation on the 1st of July, 1858?
- A. I was clerk for Mr. Day.
- Q. Where was Mr. Day on that day?
- A. I think in Providence; he was absent.
- Q. Were you in the city of New York?
- A. Yes, sir.
- Q. At his place of business?
- A. Yes, sir.
- Q. Did you have in your possession these papers, or either of them about that time?
- A. I think I had them on the 2d of July; but not with the indorsement.
- Q. Do you remember from whom you received them?
- A. I do not.
- Q. Whether they came by mail or not?
- A. I do not know.
- Q. What did you do with them?
- A. I served them on Judson.
- Q. Who instructed you to do so?
- A. I do not recollect. I was told to serve them by some one. There were several gentlemen present.
- Q. Did you tell Mr. Day when he came to New York that you had served them?
- A. I think he was in New York at the time.
- Q. Was he present when you were instructed to serve them?
- A. I think likely he was. I do not recollect.
- Q. Did you serve them for any other person than Mr. Day?
- A. Probably for some one in the concern. I think Richardson was present.
- Q. What did he tell you to do with them?
- A. I do not recollect who told me to serve them.
- Q. Where did you receive your instructions?
- A. At Mr. Day's house.
- Q. His private residence?
- A. Yes, sir.
- Q. Had you any originals or any copies like them?
- A. Of this paper?
- Q. Yes, sir.
- A. I do not recollect that I saw them that morning when I served them.
- Q. Was there in Mr. Day's possession an original like this?
- A. I do not know that there was at that time.
- Q. At any time?
- A. I have seen a copy since.
- Q. I will refresh your recollection by the original paper. That is your signature?
- A. Yes, sir.
- Mr. BRADY here read the notice which Mr. Waldron served.

Cross-examined by Mr. Richardson.

- Q. Did not Mr. Simpson bring that paper on to New York?
- A. I do not know who brought it.
- Q. Don't you recollect Simpson's coming on with some papers from Chaffee to serve?
- A. I know he came on from Providence.
- Q. Don't you know he brought some papers?
- A. I do.
- Q. Do you know that you took some from him?
- A. I took several from him.

Q. Did you take this one?

A. I cannot possibly tell.

Q. You don't know whether you received it from him or Mr. Day?

A. I do not. I had six or seven.

Q. Do you know that Day ever saw it before it was served?

A. I never saw him read it.

Q. Do you know that he ever saw it in your hands?

A. I do not recollect that he did.

Q. You don't know whether Simpson requested you to serve it or somebody else?

A. No, sir.

(Paper read—Adjourned).

FOURTH DAY.

PROVIDENCE, Sat., Jan. 27, 1855.

TESTIMONY OF HOWE, SEAVERN, AND PETERS.

The Court announced his decision upon the question of insufficiency of notice and pleading invalidity of the patent—considering the notices to the plaintiff sufficient, and that there was nothing on the record by which the defendants were precluded from pleading invalidity. Exceptions taken.

DR. JOHN I. HOWE SWORN AND EXAMINED BY MR. BRADLEY.

Q. When did you first try any experiments in machinery in the manufacture of India rubber?

A. As nearly as I can recollect, the first machinery I constructed was in the year 1829; precisely what time I cannot state, but it was as early as that.

Q. State the place.

A. When I commenced the experiments I resided in the City of New York. I constructed the first machine while I resided there. In the spring of 1829 I moved away to North Salem, Westchester County, and there completed a second machine in that same year.

Q. Look at these models (exhibiting two models purporting to be like Dr. Howe's machines), and explain the kind of machinery that you put into use and applied to rubber.

A. These models seem to have been prepared according to a verbal description I prepared, and they represent the rollers, and embody in my machine the mode of operating these rollers.

Q. You meant to state that this does not represent the whole of your machine, but only the roller part?

A. Yes, sir. There are other portions not represented here, which are not essential principles embraced in the rollers. The machine which this (model No. 1) is designed to represent contained two rollers. It consisted of a solid log of lignum-vitæ, about three feet long, I think, and sixteen inches in diameter. The small roller here represents a roller which was four inches in diameter, consisting of wood with an iron shaft through it, covered on the surface with sole leather, turned off round. These two rollers were geared together by means of two cog-wheels of equal size, which having the same number of teeth, gave to the large roller a velocity of four times that of the small one.

Q. Now, please explain the other machine.

A. This model (No. 2) represents the rollers of a machine I constructed afterwards and put to the same use. The rollers were of cast-iron, about eight inches in diameter, and four feet long, as nearly as I can recollect. The rollers were of equal size; on one of them was a wheel, and on the other a pinion, the wheel being four times as large as the pinion, so as to give the roller on which the pinion was placed four revolutions to the pinion rollers one revolution, so that the surface of the first roller has four times the speed of the surface of the second.

Q. They were of metal, hollow, revolving upon one another with an unequal motion?

A. They were cast perhaps an inch thick, iron heads were put in the ends, and a wrought-iron shaft put through them. The wrought-iron formed journals on which they turned.

Q. Now please explain the use to which you put these two machines.

A. With the machine represented by No. 1, before I left New York I spread rubber on cloth. I also used it in preparing the composition; but afterwards, when I got into the establishment that I got up in North Salem, I used it simply for grinding or preparing the rubber composition, and I used machine No. 2 for spreading it upon the cloth.

Q. What year was that?

A. 1829.

Q. Where and how were they used?

A. The use I have last described was made in North Salem, through the summer of 1829, and as long as I continued to operate in the enterprise; but I cannot remember precisely how long it was. It was the greatest part of one year, and possibly more. My process consisted in softening the rubber by spirits of turpentine generally—sometimes by the use of oil of tar, which acts on the rubber in a similar manner to turpentine.

Q. After that it was necessary to grind it still more, and you put it in that machine?

A. Yes, sir. There was an apparatus fixed to put it upon, and it was passed upon the small roller and transferred to the large roller, and a scraper to scrape off the composition from the roller, and put it back to make it undergo another operation, until it was reduced to the proper consistency, which was that of a uniform paste. Ultimately, my object was to use as small a portion of solvent as was sufficient to enable my machine to reduce it to a uniform consistency.

Q. How thick was this rubber in the first machine?

A. A stiff paste; perhaps I might compare it to very soft dough, without the adhesiveness of dough. It lacked the adhesiveness of rubber, as I have since seen it prepared with a less quantity or no solvent.

Q. Did you find any difficulty in the solvent? Was one object of your process to get it into a uniform consistency by putting it through the rollers?

A. The object of putting it through rollers was to make it of a uniform consistency.

Q. When the rubber was taken from the solvent was it uniform or lumpy?

A. According to my experience, the rubber, when put into the solvent, in pieces of a convenient size, absorbs a portion of the turpentine and swells up considerably, and becomes soft; and these masses did not undergo a solution by the action of the turpentine in the quantity I used. The pieces of rubber will expand and become so soft that they may be worked up together so as to form a uniform mass like dough or paste. The object of machine No. 1 was to reduce it to that uniform consistency.

Q. Do I understand that you used as little solvent as you could, and which the strength of your machine would enable you to do without?

A. According to my recollection, I ultimately arrived at only that rule about the use of solvents, which was—to use enough to soften the rubber sufficiently to enable my machinery to act upon it properly, and reduce it to the consistency that I wanted.

Q. Now explain the other machine.

A. In this machine the top roller had its bearings upon two levers, one at each end, connected by cords and pulleys. By moving these levers by the cords, I could lift the roller clear of its connection in the gearing and its contact with the other roller. We had a table made, standing back of the machine, some 60 feet long. At the further end of it was a large roller fixed. The cloth was stretched upon the table, and the two ends connected by cords passing round two pulleys placed at the ends of the rollers, so that the cloth and cords formed a band. In operating the machine, the composition was put so as to be taken up by the lower roller. The lower roller had a faster motion than the upper. The composition was taken up by the lower roller off from the cylinder, and transferred to the cloth, and the cloth passed under the table, and was suspended under the table.

Q. Do I understand that these were made of hollow metal, operated with unequal speed, and took the prepared rubber and put it upon the cloth?

A. The composition being applied to the lower roller, was transferred from that to the cloth, passing between them. The cloth passed over the slow roller. The composition was applied very successfully to the cloth; although, the rollers not being straight, it did not spread itself by a very equal thickness. When the cloth had nearly all passed, I lifted the upper roller off, so as to remove the cloth from the composition, and prevent the apparatus for supporting it from passing between the rollers. The cloth passed over the upper roller, and through between them.

Q. You took up the rubber on the lower roller, and pressed it upon the cloth?

A. Yes, sir. We could, considering the quality of the machine, spread very successfully a great many yards of cloth of different kinds. We doubled some, —put two pieces of cloth together. To do that, we had a pair of equal cog-wheels to put on these rollers, and make them roll equally.

Q. Equal or unequal, just as you pleased?

A. Yes, sir.

Cross-examined by Mr. Richardson.

Q. Did you cause that model, or either of them, to be made?

A. No, sir.

Q. Have you ever seen a model of your machinery before?

A. I do not recollect that I have.

Q. When did you first see this?

A. Since I came here as a witness.

Q. They were prepared under your eye and direction?

A. No, sir. I believe I stated that they were made from a verbal description.

Q. Was that one (No.), geared in the manner it is there?

A. No, sir.

Q. Are these geared as yours are geared?

A. They are; that is to say, geared by a wheel and pinion,—the pinion having one quarter the number of cogs that the wheel has.

Q. You have testified upon this matter before?

A. Yes, sir; twice before.

Q. On the application for the extension of this patent?

A. I do not know that I was informed as to the particulars when I gave my testimony; but I suppose I testified once upon the application for the extension, and once in reference to a suit in which Mr. Day was engaged.

Q. In which he was sued for infringing this same patent?

A. Yes, sir; I suppose so.

Q. Do you recollect what you testified to?

A. Only in a general way.

Q. Have not you seen your testimony lately?

A. I saw a copy of an affidavit that was supposed to be given on the application for the extension.

Q. Who showed it to you?

A. Shown to me by Dr. Hartshorn.

Q. When was that?

A. Within two or three weeks. It was when he was at my house.

Q. Read that paper (handing him a paper), and see if it is not an exact copy of your testimony?

A. I can read it; but I don't know whether it is an exact copy. (Reads it.)

Q. Is it a copy of your deposition?

A. I see no reason to doubt it.

Mr. RICHARDSON read the deposition in which the deponent says, "I did not try to manufacture rubber without the use of a solvent either with my machine or any other way."

Q. When did you quit the rubber business?

A. I stated that I suppose I carried it on perhaps a year or perhaps more—maybe not quite a year.

Q. Then you must have left it sometime in the spring of 1880?

A. I don't think I operated after the spring of 1830; but I am not sure.

Q. You are sure you moved to Westchester County in the spring of 1829?

A. I cannot be mistaken in that.

Q. About what date did you fix for building these machines?

A. According to my recollection this machine (No. 1) was built so that I used it in New York through the course of the winter of 1828-9. I kept rooms in the old state prison and operated to some extent with that machine.

Q. When did you build the other?

A. The other was commenced before I left New York, and finished when I went to Salem.

Q. (Handing him a book,) Is that a copy of the specifications of a patent granted to you about the 3d of January, 1829?

A. (Reads it,) Yes, sir.

Mr. RICHARDSON read the original paper containing the same, witness having acknowledged that it was the original patent.

Q. Now this machine (No. 2) you say is a spreading machine?

A. This machine I used for spreading.

Q. Does this represent it?

A. It represents the principal rollers.

Q. One was geared to go faster than the other?

A. Yes, sir.

Q. Does it represent it in any other way?

A. Not in any specific way.

Q. Does it look like the machine?

A. It looks like it as a small wooden model looks like an iron machine—that is to say, as far as it shows the rollers.

Q. Was not the lower roller set in a box, made tight, for the purpose of holding the liquid composition?

A. There was a trough placed under it that held the composition. I supposed that the composition would be in such a fluid state as to require it, but in the use of the machine I dispensed with that, and applied the composition with a bar placed up against the roller.

Q. You made a specification of this once?

A. I caused it to be made.

Q. Do you know the date of it?

A. I do not. It was before my leaving New York, which was in the spring of 1829.

Q. That had the box with the rubber to be taken out?

A. I suppose it had.

Q. (Handing him a drawing,) See if that is not a rough drawing of your machine without the gearing.

A. I cannot remember the machine that represents; a part was considerably complicated; I cannot remember the details. This, I think, may be called a sketch of this machine (No. 2) as I constructed it, and perhaps as it was drawn in the specification; but I cannot remember the whole of it. It was more than twenty-five years ago.

Q. (Handing him the original drawings,) See if that is what you prepared for making the application.

A. I should give my opinion that this is a correct copy of the drawings I had made, and further that these drawings coincide more exactly with that machine, as I had it first constructed, than with this (No. 2.) This machine never had but two rollers for acting upon the rubber in the process of spreading; but I had a small roller placed below for the purpose of winding up the cloth when I doubled the cloth.

Q. You are satisfied that that is a copy of the drawing prepared by you at the time?

A. Yes, sir; I see several things about it that I recollect.

Q. Do you know where these machines are now?

A. What there is left of them I suppose to be in North Salem—if there is any thing left.

- Q. Have you looked there?
- A. Not lately.
- Q. Did you tell Dr. Hartshorn where they were?
- A. I have not.
- Q. Did he ask you?
- A. I know that one or both of them have been used to apply to paper machines for pressing paper.
- Q. How many goods did you ever sell during that year in all?
- A. I cannot tell.
- Q. Did it amount to a hundred dollars?
- A. I presume it did.
- Q. Did it amount to \$150?
- A. I cannot tell. I can only give my opinion that it amounted to as much as \$100. I know the sales were very small. We prepared a variety of articles and put them into the market, but they were not very serviceable nor valuable, and did not sell very well.
- Q. You should think that it amounted in all to \$100?
- A. I should think it might have amounted to \$100.
- Q. Did you get your pay for them?
- A. I believe we did—all.
- Q. You don't know whether they were returned?
- A. No, we did not have much complaint about those we sold. Most of the goods we prepared consisted of prunella for ladies' shoes. It was used very much for them at that time. My invention was to make them water-proof—on the back of the prunella.
- Q. There was an interlining to make up the shoe?
- A. Yes, sir.
- Q. Did you make the shoe yourself?
- A. No, sir; they were made in the ordinary way, as if the preparation had not been applied to the cloth. We also prepared some cloth for carriage-tops, and some designed for garments. Some of them were sold to the extent—I do not now remember how great; it was twenty-five years ago.
- Q. You don't now remember precisely how that machinery looked?
- A. I do not, of which No. 1 is a model. I know I had several rollers.
- Q. You remember the little roller was covered with leather?
- A. Yes, sir, I remember distinctly, and I see that is not stated in my affidavit. I remember very perfectly about it, because there was some considerable trouble in getting the leather properly applied.
- Q. When you began to work that large machine, you put your rubber in the trough and the lower roller took it up, carried it round, and spread it?
- A. I said that was the design of it.
- Q. That is the way you commenced it?
- A. I do not remember whether I operated in that way. I think likely. I know that afterwards we dispensed with the trough.
- Q. Did you use the trough at all?
- A. I think I did not use it much. I think I might have tried it, but it did not work according to my expectation. That is my recollection, though I cannot say distinctly. I know I changed my plan ultimately, and did not use the trough.
- Q. And you do not recollect how far the trough was successful, but that plan was to have the roller revolve, and take the rubber to the cloth in a dissolved state?
- A. That was the design.
- Q. That was the plan?
- A. That was the plan.
- Q. That is the way you stated in your previous examination?
- A. I cannot remember.
- Q. Such was the fact; afterwards you made some change until it became what it was. How did you get the rubber on to the cloth?
- A. In the spreading machine the cloth passed over the upper roller, and

the composition passed upon the lower roller, so that it became piled between the cloth and the roller and passed upon the surface of the cloth.

Q. Was not the rubber pressed tight against the roller, so that it would run through?

A. The rubber would not run through if it was not pressed tight. It was placed here as a matter of convenience to support the rubber. The composition was thrown upon a platform here, and I think there were pieces here fitted on top of the platform to curb it in. As the rollers revolved, the composition was carried between and pressed against the surface of the cloth—the cloth passing round the upper roller.

Q. How many coats did you put on the cloth before it was sufficient for prunella shoes?

A. I have no specific recollection of more than one.

Q. Was it not more than six?

A. No, sir; not more than two or three coats.

Q. It was necessary to put on two or three coats for prunella shoes?

A. That is my impression.

Q. After you put on one coat, did you dry it before you put on another?

A. I did.

Q. You took it off and hung it up to dry?

A. I did. The cloth was carried on to the top of the table, and we had to bar at each end of the cloth, and we slung it up by ropes.

Q. You stated that this is a correct drawing?

A. I think it is—not as I used the machine, but as I specified it. I did not use any wheel corresponding to C. For spreading the rubber I used two cylinders.

Q. You did not afterwards use the trough, but the platform instead?

A. That is the way I used it ultimately.

Q. What is the wheel O? Any thing more than a guide?

A. It looks so.

Q. Do you see any thing else you did not use?

A. I did not use the trough E, nor F, which was designed to put hot water under the trough.

Q. What does G represent?

A. I can only suppose from the appearance of it what I think it means. I suppose it was designed to scrape the composition off of this roller in the process of grinding.

Q. With these exceptions, you think it is a proper drawing of the machine as you finally used it?

A. I do not say so; it don't represent distinctly the rollers; it is an imperfect drawing. Here is a lever which shows the manner the upper roller was lifted off the other, and the manner in which it may be pressed down in addition to the weight of the roller. And in addition to that there was another weight that lifted this up.

Q. What material was the frame made of?

A. Wood.

Q. This frame was all open work—a mere stand?

A. Yes, sir. The rollers were not designed to operate with great power.

Direct resumed by Mr. Bradley.

Q. Are you the first inventor, so far as you know, of the application of turpentine and other solvents to rubber?

A. I suppose not. I had not claimed to be the inventor of that; my claim is for other solid substances to rubber, through turpentine and other solvents as a menstruum.

(Objected to; question allowed.)

A. I wish to state that the greatest part of my experience was after that specification was drawn, and if there is any discrepancy in that and my testimony, it may be attributed to my having learned more than I knew then.

Q. The date of that application is Jan. 2, 1829, and in the spring of that year you moved to Westchester; now, when did you make this drawing?

A. I procured it to be made, I suppose, during the winter of 1828-9. It was made before I had had much experience in the use of these machines.

Q. Did you make this machine (No. 2) in New York?

A. I do not know whether we gave orders for the casting or not, but the rollers were not finished turning until some time after I moved into the country.

Q. After that drawing was made you went into the country, and there first put together that machine?

A. Yes, sir.

Q. I notice this drawing contains two rollers, A, B, and a guide C; did you use any other rollers in connection with these two, and if so, for what purpose?

A. For putting two thicknesses of cloth together and cementing them. We had a small roller for winding up the cloth. We put on wheels of equal size so as to cause equal speed.

Q. You gave up the idea of applying for a patent for that machine?

A. I never applied for it, I believe.

Q. You were asked about the quantity sold; what was the state of the rubber manufacture at that time?

A. I do not know that there had been any prepared and put into market, except what Dr. Comstock might have put in; and that I do not know of my own knowledge. I had no information that he did, except that I might have heard that he prepared cloth for shoes to make them water-proof.

Q. You mean to say that it was an unknown manufacture in the United States?

A. Unknown everywhere.

Q. What is oil of tar? the same as coal tar?

A. No, sir; oil of pitch pine.

Q. It seems you gave a deposition in which you stated, that these things of yours were in public use; in whose behalf were you then examined?

A. In behalf of Mr. Day.

Q. And cross-examined by Mr. Judson?

A. Cross-examined by Mr. Judson—direct by Mr. Gifford.

Q. In whose behalf was Judson acting so far as you know?

A. My recollection is rather indistinct about it; I do not know positively. I have known since that Judson was—

Mr. RICHARDSON. Stop.

Q. You do not know; very well.

A. I believe I was examined at the request of Mr. Day.

MR. SEAVERN, RECALLED; EXAMINATION RESUMED BY
MR. BRADLEY.

Q. You said you had examined the specifications and drawings of the Chaffee patent?

A. I have.

Q. Have you examined it heretofore?

A. I examined it last summer.

Q. You are a machinist; how far does the machinery described in that patent differ from the machinery used in the paper-mills, as early as 1831-2 to your knowledge?

(Objected to as irrelevant.)

Q. How far does it resemble or differ from the machinery used in the paper-mills, and how far did the cylinders used resemble those now in Dr. Hartshorn's factory?

A. In the paper-mill the sheet of paper passes through rollers, and thereby becomes a sheet of paper—the water is pressed out. That is the first operation after coming from what we call the vat. I have seen them lie in the position of this set of rollers (in the model). That is about as ancient an application as the manufacture of paper. There is a set of rollers now running at Ames's mill, at Springfield. These rollers ran at an even speed. They might have varied in diameter, but there was no friction. I turned a set of rollers in 1835 which were imported to this country, and used in Hollister's mill at Andover. Steam was introduced into these rollers. That was a pair of press rollers.

Mr. JENCKES. I see no reference in the notice to any such place?

Witness. That is the earliest introduction of steam into the rollers to my knowledge.

Mr. BRADLEY. Put that one side, and speak of the machinery you saw in 1831-2: (Exhibits the complicated model.)

Witness. There is a very good representation of a four-roll calender, for calendering the paper in sheets, or in the web.

Q. How early was this known to your knowledge, and where?

A. In the town of Pepperill, Massachusetts.

(Objected to.)

Q. Do you know of any in Boston, or Roxbury?

Mr. JENCKES. Let the witness state where.

Q. Have you known of the making of such a machine, and if so, where and when?

A. The first calender machine, of which I have any knowledge, was made in 1830, in Lowell.

Mr. JENCKES. That is not noticed in connection with this witness.

Mr. BRADLEY. We will waive the town of Lowell, and vary the question.

Q. State the resemblance between that machine, or any portion of it, and what you have known to be used in 1830-1-2, either in Boston, Roxbury, Salem, Newton, Worcester, Hartford, or New Haven.

A. I am not positive about the year at Newton, but I think it was in 1834, that it was first applied there, at Curtis's mill.

Q. What was the kind of machinery?

A. They had two rollers and three.

Q. How were they made and geared together?

A. Made about eight, nine, or ten inches in diameter, and placed in a stock one over the other, at the end of the main frame on the machine, and then we put gears on the necks of the rollers outside the stand. The gears, where the rollers were made of equal diameters, had a larger number of oogs in some of them than the others. The object of these gears was to produce a slipping surface, that caused a polish of the paper.

Q. How were these rollers made?

A. Of cast iron, turned and ground together before being put in the machine.

- Q. Rolling upon one another with an unequal motion?
- A. Yes, sir.
- Q. Please state any other of these places for making rollers or cylinders like this for any other purpose besides—paper-mills, or any other purpose.
- A. I have no recollection in Newton of their being made.
- Q. Do you know where they were made?
- A. They were made at Windham, Conn.
- Q. They were not made at any of these places?
- A. No, sir; I am not positive that they were. The first machine was made in Europe; four of them were imported at the same time.
- Q. Was there a mill at Worcester?
- A. There was a paper-mill at Worcester.
- Q. What kind of machinery was used there?
- A. A cylinder machine. There is nothing here that represents it, except that set of rollers (No. 2). They dried the paper on the cylinders; it was heated by fire. We called it the fire drier. It was about eight feet in diameter, with calender rollers at the end.
- Q. That machine of Dr. Howe's gives an idea of it?
- A. Yes, sir.
- Q. What were they made of?
- A. Cast iron—some of wood.
- Q. That was in Worcester, you say?
- A. That was at Slievegammon village.
- Q. Were you acquainted with any machine shops so long prior to 1836, where such cylinders were made?
- A. My most particular knowledge was with the one where I learned my trade, at Windham, Ct.
- Q. Do you know of any in Boston, Roxbury, Worcester, Hartford, New Haven, Salem, or Newton?
- A. They made rollers at Boston, but I cannot tell whether as early as that time, because they had to go there to get their castings made to fit.
- Q. As early as what time?
- A. As early as 1834. There were castings got there when I worked at the paper-mill at Newton.

Cross-examined by Mr. Jenckes.

- Q. How old are you?
- A. Thirty-eight.
- Q. Did you ever know any thing about the India rubber business?
- A. I do not. I once or twice made some machinery for that purpose, but didn't know how to use it.
- Q. Those rollers in Newton, were they cast solid?
- A. No, sir.
- Q. How are they cast?
- A. Hollow.
- Q. Always?
- A. Most always. I never saw a solid one used.
- Q. They could not be cast of that diameter very well?
- A. Yes they can. The first rollers from Europe were of solid cast-iron—the press rollers.
- Q. Who worked there with you at Newton at that time?
- A. I could not tell you. They were old paper-makers, and they are dead now. I was a boy, and worked in the mill then. It was before I learned my trade.
- Q. When did you go to learn your trade?
- A. In 1834.
- Q. Who cast these rollers at Newton?
- A. The hollow ones were cast at Windham. They came there before went to my trade.
- Q. Who put them up and geared them?

- A. I cannot tell.
- Q. Do you remember any person living now who worked there with you?
- A. Yes, sir. There is Charles H. Lyon and Peter Lyon, the owner of the mills. I worked in the mill with them as long as we used to make it by hand.
- Q. Where do they live now?
- A. Peter lives at Chaplain, Connecticut, and Charles in Dorchester, near Boston. His place of business is in Boston.
- Q. When did they work the machinery by hand?
- A. As long ago as 1828, and before that. I used to work in the mill occasionally and perform the duties of lay-boy.
- Q. Did you know any thing about machinery when you worked there?
- A. No; not practically. I used to tend the machine occasionally.
- Q. Do you know whatever became of that machinery?
- A. I do not. I saw some parts of the first cylinder machine in 1836, I should think, moved up to Connecticut.
- Q. Was this factory broken up and the business discontinued?
- A. No, sir; that establishment is in existence now in the town of Chaplain.
- Q. How about the one in Newton?
- A. There is still a mill there, but the kind of paper manufactured is different from what it was then.
- Q. Did you ever go back there to work?
- A. No, sir.
- Q. Did you ever go back at all?
- A. I have had occasion to go there since; that is my home.
- Q. This machinery was for the purpose of finishing paper?
- A. Not in that mill. That was merely a press-roller in Lyon's machine; it had no drier nor calender, but Curtis's mill did.
- Q. Those were solid rollers?
- A. Those were not iron, but wooden rollers, precisely like that model.
- Q. What kind of wood?
- A. I do not know; the wood most commonly used was maple.
- Q. Were the iron ones that came from Europe at Curtis's?
- A. Yes, sir.
- Q. What were they used for?
- A. Those that came from Europe were press-rollers; the driers were got up in this country.
- Q. After that, the calender rollers were got up?
- A. Yes, sir; got up in this country.
- Q. That was Andover you spoke of—not the factory at Newton?
- A. Yes, sir; in Curtis's mills.
- Q. Used for what?
- A. Used at the end of the machine; the object was to give the paper a better surface.
- Q. What do you mean by the end of the machine?
- A. Suppose the machine had four or five drying cylinders; before you get to the end of the machine, sometimes you put on a set of calenders over the top, and press it through two of those rollers with steam in them. It is supposed to improve the appearance of the paper, by drying and pressing simultaneously. And then, after it has passed through the last drier there, we used to put on the friction.
- Q. The heat was before it came to the calender?
- A. The heat was in the cylinders and calenders too; you get better service by introducing steam into the calender.
- Q. But you stated you did not know the use of steam till later?
- A. I do not recollect when steam was introduced into Curtis's calender.
- Q. Do you recollect when these calenders were built?
- A. I do not.
- Q. Do you know who set them up?
- A. I could not tell.
- Q. You do not know when steam was used in connection with them?
- A. I do not.

Direct resumed by Mr. Bradley.

Q. There were two paper-mills?

A. Several of them.

Q. They used wooden, cast-iron, solid, and hollow cylinders?

A. Yes, sir.

Q. The hollow ones were made at Boston or Windham?

A. Some of them were made there; that set that went to Pepperill was cast at Boston.

Q. And steam was put into them?

A. Yes, sir.

Q. (By Mr. RICHARDSON.) How do you know they were made at Boston?

A. I was not present; the pattern is alive there, because rollers have been cast from it since; I did not see them cast.

Q. As a machinist, tell us the difference, or resemblance between Chaffee's machine, as described in his specification, or that model, and the machinery you have described.

(The COURT.) You have been over that.

(Mr. BRADLEY.) I was about giving his opinion in addition to the fact.

ARNOLD PETERS, SWORN AND EXAMINED BY MR. BRADLEY.

Q. Tell us your place of residence.

A. Providence.

Q. What is your occupation?

A. I am a machinist; I act in the capacity of a constructing machinist.

Q. In what works?

A. In the Phoenix Iron Foundry, in this city.

Q. How long have you been in that business?

A. In that particular capacity since 1841.

Q. How long in the business generally, in the same place?

A. I have been off and on in the same place since May, 1834.

Q. Were you engaged in a similar business prior to going there?

A. I was.

Q. How many years prior?

A. From 1828, I believe.

Q. Did you make this model?

A. I did.

Q. How early did you know cylinders to be made and put together like that in the city of Providence?

(Objected to; question allowed.)

A. The first machine of that character, I had nothing to do with the construction of. I saw it, however, in 1834—I think in 1833—which was operated by some person who procured the privilege to use it in the attic of the Phoenix foundry, where power could be obtained. I was in a neighboring establishment at that time.

Q. Describe the machine you saw there in 1834.

A. It had two rollers in this form (small model), and they were connected together by two gears, which were something like that proportion—the gears nearly two to one.

Q. What were the cylinders made of?

A. Iron. During the same year, I got up patterns for making similar machines, which were built there. I got up the patterns for them in July and August, and built certain frames.

Q. How were the cylinders made—hollow or solid?

A. They were cast hollow.

Q. Did you ever know of these to be used in grinding rubber in Providence?

A. I have many machines of the kind used to grind rubber.

Q. I mean in 1834.

A. These were made in 1834, and went to New York.

Q. What was done with the one you saw in the establishment?

A. I could not say. I understood it was used in several.

(Mr. JENCKES.) Give your own knowledge.

A. I saw it there; that is the extent of my knowledge in regard to the machine.

Q. You saw it in 1834, in that mill?

A. I did.

Q. The power was hired?

A. The room was; I cannot say about the power.

Q. What was that machine used for in that place?

A. For grinding rubber, as I understood.

(Mr. RICHARDSON.) State what you know.

A. I did not see what. I know it was said for grinding rubber.

Q. You say in that summer you made a casting for other machinery like it; for what purpose was this made?

A. For grinding rubber.

Q. You made them for that purpose?

A. Yes, sir.

Q. For whom were these machines made that you got up for grinding rubber?

A. For Samuel Marsh, as I find by the books.

Q. Have you referred to your books to fix the dates in this matter?

A. I have.

Q. Please state what memorandums are upon the books of the concern.

A. I find by the books—

(The Court.) Stop; your books can only refresh your memory, so that you can swear to your memory.

(WITNESS.) I wish here to state, that I examined the books to get these dates, because I was accused of being in friendship to one of the parties in this case. Rather hard feelings seemed to be manifested against me after I had made an affidavit for one of the parties, and I was led to make another affidavit that I would not fix the time, as I had not got it to swear positive to, anterior to a certain date, although I thought I could get evidence, and I searched the books to get that evidence. I was not exactly impeached, but hard feelings seemed to exist against me.

Q. Now that you have refreshed your recollection by the books, you state that it was in 1834 you saw that machine?

A. I referred to the books, and I think it was in 1835 that they were delivered.

Q. What was made there in 1834?

A. That machine was operated in 1834, and I assisted in making another kind of machinery, but in 1835, the machines that went to Mr. Marsh were made.

Q. Please state also whether you have known of a calender of that kind, hollow, with an unequal motion, to have been used for other purposes prior to 1836, and if so, how early.

A. In 1835. I made also certain friction calenders, which were very common in this vicinity. I did build some to go to the same place for the same man—friction calenders; these were for cotton goods.

Q. Was that common machinery at that time?

A. It was.

Q. How early do you know it to have been known and used for other purposes than rubber?

A. I think for thirty years—I have no doubt.

Q. Is this Phoenix foundry one of the establishments where that machinery is made?

A. I consider that it is more than any other establishment in the country. I think I built some twenty odd with my own hands, of that kind of calenders for cloth; and they had many others built since—I think twenty-five or twenty-six. For several years I followed that branch of the business.

Q. Were these calenders heated by steam?

A. Sometimes by steam, and sometimes by heated irons. Some heat themselves with a little aid in starting in the morning—overheat themselves sometimes.

Q. To what purposes have you known such calenders to be applied in this city?

A. To finishing the cambric goods—the friction calenders, and those without friction, to finishing white goods.

Q. Do you know of the application of calenders to the starch manufacture?

A. I did construct a machine on that principle for the purpose of working starch.

Q. Where?

A. On Eddy street.

Q. When was it?

A. I cannot fix the time when we built it; I should think six or seven years since. It was burnt some two or three years since, and was rebuilt. It

was so successful a machine that they rebuilt it immediately, and put it in operation.

Q. You say you have known of the use of the calender in this city for thirty years, made in this way?

A. I think for thirty years.

Q. Geared together, hollow cylinders, heated by steam and otherwise?

A. Yes, sir.

Q. You speak of two kinds of rubber machines in 1834-5; are you able to state what two times they were sent off?

A. In 1834 we constructed a machine for cutting India rubber cloth. I assisted in getting up one, which I understood went with a machine which was geared to be operated in this iron foundry shop.

Q. In 1835 you got up a machine which was to apply rubber to cloth?

A. Yes, sir.

Q. And in 1835 for grinding?

A. Yes, sir.

Q. (By Mr. RICHARDSON.) You do not say you built it?

A. I say in 1834 I assisted in constructing a machine for cutting, as it was said, cloth with India rubber. It was paid for by Mr. Briggs of Smithfield, and was got up for Mr. Millard, as I understood, and was to be an assistant to that preparing machine I saw there, which was built somewhere else.

Q. Then in 1835 you built preparing machines like these models?

A. Very like these—the principal rollers just the same.

Q. Was there any difference in the construction except in the increased size?

A. I know of none except increased strength.

Q. That is a model of the machinery used by the Doctor?

A. It is various, like all others; there is sometimes more and sometimes less friction. That is about the average.

Cross-examined by Mr. Richardson.

Q. When did you see the first rubber machine for any purpose?

A. Of my certain knowledge, the first I ever saw was the one I helped to build in 1834, at the steam cotton manufactory in this city.

Q. In what capacity were you there?

A. As machinist.

Q. In what time in 1834 were you applied to to build it?

A. I think it was in July.

Q. Who made the application for the machine?

A. Joseph Briggs, of Smithfield, made the first, I think. He came in the shop and asked me some questions—where it would be proper to get such a machine made.

Q. Was he an India rubber man?

A. He was; he was introduced by somebody who had a knowledge of the business.

Q. Who was the man?

A. I think his name was Millard.

Q. Gulielmus Millard?

A. I do not know. I know him by sight; he is sitting here.

Q. How many rollers had that machine?

A. Four, I think.

Q. Did you ever see it put to any use?

A. I think I did, but I do not say positively; I think it was used in Elm st.

Q. You will not say positively whether you saw it or not?

A. No, sir; we made it rapidly and sent it out.

Q. There were four rollers?

A. As near as I can recollect.

Q. A wooden frame?

A. A wooden frame.

- Q. Solid or open?
 A. Open.
 Q. Have you got the form of it here?
 A. Yes, sir—(points to the drawing.) Drawn from my best recollection.
 Q. Where did it go to from the factory?
 A. I do not know.
 Q. What was the size of the rollers?
 A. I should think perhaps six or seven inches in diameter, and perhaps three feet long.
 Q. Might they not have been four feet long?
 A. Very probably.
 Q. Are you positive they were any more than five inches in diameter?
 A. I am not.
 Q. Don't you know that it went into the possession of Hiram Hutchinson of New Jersey?
 A. I do not know that fact.
 Q. Will you be positive they were any more than four inches in diameter?
 A. I cannot say.
 Q. Are you positive they were solid cast iron?
 A. I think they were.
 Q. Have you any doubt?
 A. I have no doubt they were solid iron. I feel very confident they were.
 Q. Were they not geared so as to run even?
 A. I am not certain they were geared at all; I think they ran even, whether geared or not. I have no doubt about that.
 Q. Who made the wooden frame?
 A. It was made in the machine shop.
 Q. Do you know the size of the leg or stand on which they stood?
 A. I do not.
 Q. It was made to turn by hand?
 A. Perhaps by hand or by power either.
 Q. Was there any arrangement for applying the power there in the shop?
 A. I cannot say.
 Q. Don't you know there was a handle made for turning it?
 A. I do not recollect.
 Q. You are positive it was in July, or the summer of 1884?
 A. I am.
 Q. No doubt about it?
 A. No doubt; I have the evidence here (pointing to the books).
 Q. Do you swear to your own recollection, or from what you have seen in the books?
 A. I fixed it as near as I could in my mind, and had the books examined after I went to the shop.
 Q. Answer my question without telling me that.
 A. I found this entry.
 Q. That is not a proper answer. Do you give your recollection from the book or from your own memory?
 Mr. BRADLEY. I submit that he has given a proper answer.
 A. I answer, in 1884.
 The COURT. The question is, whether you state from your book merely, or from memory?
 Witness. I will state it from memory.
 Q. You now remember, without the books, that the fact was so?
 A. I do.
 Q. Now when was that machine brought up into the garret by somebody, you did not know who?
 A. It was prior to making these machines that went to New York, which were made in the fall of 1885; prior to the getting up of these patterns.
 Q. Give us the date, if you can?
 A. I cannot give the date.

- Q. 1835 or 1836?
- A. 1835.
- Q. Summer or fall?
- A. Fall.
- Q. Where was it put?
- A. We built those to go South in the fall of 1835, but this was the summer prior.
- Q. You cannot fix whether it was a month, two months, or six?
- A. I cannot.
- Q. It was after you built those other machines you have exhibited on paper?
- A. I feel very confident I saw it there when I built those machines. I cannot fix the date.
- Q. Who called your attention to its being there?
- A. My attention was called in no other way than passing by it when I went to a place occupied by the then draughtsman of the concern. He occupied a place for drawing purposes, and going there to call him out for some business I accidentally saw this machine.
- Q. Did you carefully inspect it?
- A. No, sir; only to see it working.
- Q. You saw it working?
- A. I do not say I ever saw it running.
- Q. Who was there with it?
- A. I was not attached to the establishment then; I only went there to order castings.
- Q. Who was the man with it?
- A. I do not know.
- Q. You don't know the object of the machine, or its use?
- A. I do not.
- Q. Can you describe it from recollection accurately?
- A. No, sir; I will not pretend to do that. I know there was a machine with two rollers.
- Q. Do you know whether they were wood or iron?
- A. I am not so positive; I think they were iron however.
- Q. Don't you know that the surface of one was covered with leather?
- A. I do not.
- Q. Do you know that it was not?
- A. I do not know whether it was or not.
- Q. Do you know whether it was geared?
- A. My impression is that there were gears very like this. I have never seen one, I feel very confident, without gears.
- Q. Who was the draughtsman you went to see?
- A. Cornelius S. Tompkins.
- Q. Does he reside here now?
- A. He resides in this city somewhere.
- Q. You used to go by there to get him?
- A. I used to go there. He wanted me to go into the country to assist in getting up some calico machines, and left word to meet him at his place; it occurs to me I met him there once.
- Q. You don't know who hired that loft?
- A. I do not.
- Q. You say some one hired it?
- A. I understood so; such things were frequently done.
- Q. Did you know a man by the name of Maring connected with that machine?
- A. I knew such a man in the rubber business, but not of his having any connection with that machine.
- Q. You did not see him standing about?
- A. I did not.
- Q. Did you know him in 1834 and 1835?

A. I was not acquainted with him as early as that.

Q. When did you get acquainted with him?

A. I cannot say I ever was acquainted with him. I knew him at a certain time, when he had his boilers blown up, and retreated from this city, and took up a water power. I went out to assist him with some mill-work. I believe the name was Maring.

Q. Was he in the India rubber business then?

A. All I know was, he told me he was going to remove his works out there; he gave me some history about his blowing up.

Q. You say you made some machines to send to New York in the fall of 1835; how many?

A. There were two delivered in the fall, and one in the spring of 1836.

Q. Single out one of those delivered in the fall of 1835, and give us a description of it.

A. I must state that Mr. Walker, the foreman, took the order and constructed the machine; I was not connected with the shop in any way. I was employed in drawing; I assisted him in certain portions. There were two rollers in the machine. It was similar in form to this, only the wooden frame with cast-iron beds. I got up the patterns, and constructed the frames; Mr. Walker, who is now foreman, finished them.

Q. Were they delivered in 1835?

A. Two were delivered in 1835. I refresh my memory from the books. The Court. Don't refer to the books.

Q. What time in 1835?

A. One in September, and the other two or three weeks subsequent.

Q. Were they all three made alike?

A. I think they were.

Q. What was the size of the rollers?

A. I think probably eight or nine inches in diameter.

Q. Are you quite certain they were over four?

A. I feel as confident—I will not say about the size—I cannot remember. I think they were something like seven or eight inches. I cannot think they were smaller. However, I will not pretend to say.

Q. These were built for Mr. Marsh?

A. Yes, sir; he paid for them.

Q. Where did he reside at that time?

A. I do not know.

Q. Did you know him at that time?

A. I did not.

Q. Nor that he paid for them?

A. No; the charge was made to him.

Q. You did not know any such man then nor since?

A. No, sir.

Q. Simply that the machines were made?

A. That is all.

Q. Do you know they were ever delivered?

A. I do not.

Q. How long were the rollers?

A. I cannot say.

Q. Were they geared to run with an even motion?

A. I think not; I think there was none made in the shop for grinding but with an uneven motion.

Q. You have said they were made for grinding; do you know what they were made for?

A. They were called grinding-machines.

Q. Who called them so?

A. Mr. Walker, the boss.

Q. Were they hollow or solid?

A. Hollow, I think; I think we made none that were not.

Q. Do you know they were hollow?

- A. Not positively; still I feel confident we never made any that were not.
- Q. You think they were hollow?
- A. I think they were; I may be mistaken.
- Q. They were cast large?
- A. Yes, sir; to cast them hollow saved weight.
- Q. Did you have a hand in building a set in 1839 for Bourne & Ware, in that factory, or Bourne alone?
- A. I did not.
- Q. Did you know of these?
- A. I did not; we have two shops; with the one that does the work I have nothing to do. These were done independent of any action of mine.
- Q. You know they were made?
- A. I know they had work done.
- Q. Have you ever seen his machines?
- A. I cannot recollect.
- Q. This machinery that you constructed in 1836, had it an even or uneven motion?
- A. That I cannot say; I did not gear them. I think there were never any that did not have a friction like that uneven gear; but I will not say as to this.
- Q. You have given some affidavits in this case?
- A. I have.
- Q. How many?
- A. Two.
- Q. One at the request of Dr. Hartshorn?
- A. Yes, sir.
- Q. And one at the request of Mr. Day?
- A. Day & Bourne.

Direct resumed by Mr. Bradley.

Mr. BRADLEY wished to have the affidavits put into the case now, if the plaintiff intended.

Mr. RICHARDSON. We have offered no affidavit—merely asked the fact in relation to it.

Q. Can you fix the time when you went from the steam-mill to the Phoenix works?

A. I think in May, 1834, I went, not into their employ, but occupied a room there.

Q. Prior to your going there, did you or not see this rubber machine, called a grinding-machine?

A. I cannot fix the time.

Adjourned.

FIFTH DAY.

PROVIDENCE, *Monday, Jan. 29, 1855.*

TESTIMONY OF QUINCY, SIMMONS, PERKINS, WALKER, WILLARD HOLMES, FIELD, HOYT, STONE, AND MCBURNEY.

SILAS A. QUINCY, SWORN AND EXAMINED BY MR. BRADY.

Q. You reside in Boston?

A. I do.

Q. You are the subscribing witness to this paper? (dated 23d March, 1835, marked B).

A. I am; that is my writing, unquestionably.

Q. Did you know Jonathan Dorr, who subscribes himself, president of the Roxbury company?

A. Yes, sir, very well indeed.

Q. Where did he reside?

A. In Roxbury.

Q. Is he living or dead?

A. Dead, as I understand.

Q. There is another subscribing witness, Israel Martin; is he living or dead?

A. Dead.

Q. Did you know that Dorr was president of the company?

A. He was so called. I know nothing except by report.

Q. Did you see this executed?

A. I should not have put my signature if I did not.

Cross-examined by Mr. Richardson.

Q. Are you connected with the Roxbury company?

A. Nothing more than as book-keeper for Mr. Mariner, the president of the company.

Q. Had you no interest in it?

A. Not the least.

Q. Own any stock?

A. Not at all.

Q. Never had any of it?

A. Nothing.

Q. How long were you there?

A. I think nine or ten months.

Q. When did you go?

A. I only recollect it was nineteen years ago. I was there at the time this paper was executed, because I did not know the parties till I went there.

Q. Hadn't you been then sometime there?

A. I should think not. I was only there about nine or ten months in all, and I cannot tell much about it.

Q. You don't know much about it?

A. No, sir.

Q. Nothing at all about the state of the business?

A. No, sir.

DAVID A. SIMMONS, SWORN AND EXAMINED BY MR. BRADY.

- Q. You reside in Boston?
 A. My house is in Roxbury; my office in Boston.
 Q. You are counsellor at law?
 A. I am.
 Q. And have been how many years?
 A. A good while; more than thirty years.
 Q. Did you know Jonathan Dorr and George Gay?
 A. Very well. Dorr was my neighbor, and Gay my partner for seventeen years.
 Q. Are they living or dead?
 A. Both dead.
 Q. Are you acquainted with their handwriting?
 A. Quite well.
 Q. Do you believe this signature to be theirs? (conveyance to the company by Chaffee, marked C).
 A. I have no doubt of it.
 Q. You are the subscribing witness to that paper?
 A. That is my signature.
 Q. Did you know Mr. Savage?
 A. Quite well.
 Q. Do you know whether he was president of the Roxbury company?
 (Objected to; the records are requisite as proof. Objection sustained; exception taken).
 Q. You saw him execute that paper? (Paper dated 24th May, 1837, marked H).
 A. I did.
 Q. It seems to have been subsequently acknowledged by you as Justice of the Peace?
 A. Yes, sir.
 Q. You are also subscribing witness to that paper? (Dated 28th July, 1844, marked I).
 A. Yes, sir.
 Q. You saw that executed by Warren Fisher and George A. Simmons?
 A. I have no doubt I did. I should not have witnessed it if I did not.
 Q. Were you connected in any way with the Roxbury company about the date of this paper, 1835 or 1837?
 A. I owned stock in the corporation, and was one of the associates that purchased the whole of the property for the purpose of paying their debts, and caused the property to be put into the hands of Messrs. Andrews and Savage, as trustees.
 Q. Was there any clerk of the corporation at the time?
 A. There was always a clerk.
 Q. What was the name of the clerk at the time of this transaction?
 A. I should find some difficulty—
 Mr. RICHARDSON. Stop. The clerk was an elective officer?
 A. Yes, sir.
 Mr. RICHARDSON. Then the records must prove it.
 Mr. BRADY. We wish to prove that the clerk is dead.
 The COURT. Proceed.
 Q. Who was clerk at the date of this paper?
 A. I cannot fix that date; I know that George Bradbury was clerk at one time, and I learn that he is dead.
 Q. Were there books of that company?
 A. There were books of records and accounts, a large number of them.
 Q. When and where did you last see them?
 A. I have no recollection of ever seeing the records since about the time they transferred their effects to the trustees.

Q. Do you recollect in whose possession these books were when you last saw them?

A. The last time I remember seeing them, I think Samuel T. Armstrong was general agent.

Q. Do you mean that he had them?

A. Yes, sir; they were in his custody at the factory; he had a counting room there, and these papers were in his possession.

Q. Have you looked for these books?

A. I have, with much care.

Q. More than once?

A. Repeatedly; some years ago, little more than a year ago, and recently.

Q. Have you succeeded in finding them?

A. I have not. Two or three years ago, when there was a suit pending in New Jersey or New York, I was applied to as if I had certainly got possession of them. I made a careful examination and could not find them. I then applied to a man named Sewell, secretary or clerk of the new associates, in hope to find the records, but he said he never had it. Some six or seven years ago Gen. Tyler, who had the custody of some of them, and who had two very large chests of books in his possession, sent them to my office, and desired me to take care of them, and they have been under lock and key since. They finally became so burdensome for want of room, that I removed them to a loft in my stable, where they have remained since. I made another careful examination of them about a year ago, at the instance of somebody who employed Gardiner G. Hubbard, a lawyer of Boston, who was anxious to get them. And again recently I was summoned here and asked to look again. I have looked, and with so much care, that I am perfectly confident they are not in my possession, and as far as I know, have not been. The records and account books are a good many of them there. The books of record of the new associates have in some way disappeared.

Q. What was your relation to the company at the time of this transfer?

A. I had some \$15,000 in the concern.

Q. Did you hold any office in the company?

A. I did not.

Q. Was there an election of this Bradbury as clerk, to your knowledge?

A. I could not say. I should have said, when not on the witness stand—

(Mr. RICHARDSON. Stop.)

Q. (By the Court.) Have you inquired of Armstrong?

A. I have, and he stated to me that he did not know any thing of it. I had once occasion to have these, and I made a journey to New York and saw him. There were records touching real estate. He told me that he knew nothing of it.

Cross-examined by Mr. Richardson.

Q. Had Gen. Tyler the same interest in this matter that you had?

A. I think he was interested as a share-holder, and also a director.

Q. Was he interested pecuniarily as you were?

A. I cannot state what his interest was.

Q. He was connected with it as an interested party?

A. I have no doubt of it.

Q. He sent those trunks to you?

A. I think he did; I had seen them at his office, and he told me he was going to send them.

Q. Has he been in court this morning?

A. He has.

Q. Who else is now living that was connected with that company?

A. I do not know unless I could see a list of the stockholders. Savage and Andrews are dead.

Q. Is James Savage dead?

A. He is not.

Q. Was he connected with it?

A. He was one trustee under the purchase by certain associates.

Q. He was connected with the new company?

A. He was trustee.

Q. Is his brother George living?

A. Yes, sir.

Q. He was connected with it also?

A. Only through me. I purchased an interest at the auction sale of the goods and lands, and induced him to take an interest for certain persons who were concerned with me who got uneasy about it.

Q. The records were in large books, were they not?

A. The record book, I think, was not very large; the account books, some of them were very large.

Q. Has there been any fire about the premises?

A. Not that I know of, where these books could have been burnt.

Q. Have you inquired of the heirs and family of these deceased parties in relation to the books?

A. I inquired of James Savage soon after his brother William died, and he could not tell me any thing about them.

Q. Did you make any search of his house?

A. I did not, but I think Mr. Savage told me he had. William Savage left no child, and I do not remember having seen his wife; but when I spoke to James Savage, he said he could tell me all that any body could, and he had never seen them.

Q. Did you find the act of incorporation in the trunks?

A. No, sir.

Q. The acts of incorporation in Massachusetts are always published?

A. They are. I saw this printed in one of the legal books.

Q. That is lost, then?

A. O no.

Q. When did you first unlock these trunks?

A. I think before they had been at my house three or four years some persons came from New York, and while they were in a little recess, I think I saw you there. It was somebody who was agent who came there.

Q. Was it not Mr. Judson?

A. I remember the name of Judson in connection with some suit, but whether he was there I do not know. I think there was a man there by the name of Haskins. I am inclined to think there was a Judson there. I think I heard his name in connection with these papers.

Q. That was about 1851, was it not?

A. I do not know; it might have been.

Q. I want to call your attention to an examination of these trunks at a late time. Was it before you had a trial for a forged note at Dedham?

A. I do not know that that would help my recollection.

Q. At that same time I went with these parties for these papers?

A. You might or might not. I do not remember you. I remember you in my office pretty well, but not as a party to that inquiry.

Q. Do you remember when this patent was sought to be extended?

A. I do. I remember I was applied to to furnish some papers at that time, but I could not do it.

Q. You were witness on that extension?

A. I might have been; I have given two or three depositions.

Q. Are you quite certain you did not give your deposition to furnish that book of records to somebody at the time the application was made for this extension?

A. I do not remember. If I did my memory has deceived me, as it never has before.

Q. Do you remember getting out any papers from these trunks?

A. I do not remember taking out any myself.

Q. You know the other time was at the trial in New Jersey?

A. There have been several trials, and I have been applied to some three or four times for these records, as if I must be able to find them, and my impression is so strong, that I unhesitatingly say I have not seen them since about the time of the transfer to the trustees.

Q. In whose possession were they then?

A. I think they would be considered in the custody of Armstrong, the general agent of the factory.

Q. Where does he live now?

A. I suppose somewhere about New York.

Q. You say you do not recollect him in your deposition on the extension of the patent?

A. I cannot say. It has annoyed me a great deal, and sometimes I have been taken off for a little trifling fee, from the necessity of obeying the law, when I have lost hundreds.

Q. You like larger fees?

A. Yes, sir.

Direct resumed by Mr. Brady.

Q. Do you remember about the time Richardson was there?

A. It was in 1850, he says.

Q. Did Mr. Richardson inquire about these books?

A. I could not distinctly say. The main man relied upon was Mr. Haskins. I do remember that Mr. Judson was there about that time, before or since, and gave me a great deal of trouble.

Q. Had Richardson been there before, or Judson?

A. I think they might have been there in relation to taking depositions.

Q. Was it the object of Richardson or Judson to find the books?

A. Certainly, they wanted me to find the records.

Q. Both of them?

A. Yes, sir; I do not say positively that Richardson was there; I think now he was.

Q. Are Fisher and George A. Simmons both living?

A. Yes, sir.

Question argued about inquiring of the witness who was President of the Company at the time of the transfer. The Court decided that Mr. Armstrong would be the better proof, and Mr. BRADY said that Mr. Armstrong would be here in a day or two. The Court allowed the testimony to be submitted, in case Mr. Armstrong was examined.

Q. Who was President of that Company at the time of the transfer to the trustees?

A. I have no doubt it was James Savage.

Q. And who clerk?

A. I think George Bradbury.

Q. What time was this?

A. In 1837.

Re-cross-examined by Mr. Richardson.

B. When did the Roxbury Company commence to wind up their business?

A. I do not know that I can say with certainty. My impression is that it was in 1836. They became embarrassed by the failure of Mariner, Tibbetts & Co., who had sunk for them about \$100,000. I knew it grew worse and worse, until they concluded the only way to save their credit was to form a new association, and the then stockholders agreed to furnish money enough to pay off all the debts. We lost in that second operation over \$50,000. The new associates had to put their hands in their pockets and pay drafts that came back from New York.

Q. What was the name of the firm that sunk \$100,000?

A. Mariner, Tibbetts & Co.

Q. What was their business?

A. Commission merchants, I should say.

Q. Was not their failure the cause of the breaking up of that company?

A. I cannot say but it was one of the causes. There was a large quantity of goods that did not sell well; besides, there was a great desire at that time to get up India rubber goods in the name of the Roxbury Company which the Roxbury Company never made. These goods went over the country and stuck together, and injured the credit of the Company.

Q. Was not that the cause of the breaking up of the company, the primary cause of the failure?

A. I cannot say that that was the primary cause; it was one of the causes. There was misfortune about large quantities of goods that went abroad, and did not sell well; besides there was a great desire at that time to get up India rubber goods in the name of the Roxbury Company, which the Roxbury Company never made. These goods went over the country and stuck together, and injured the credit of the company.

Q. You suffered a loss in goods that were bad?

A. I recollect of goods that were brought back that were in a bad state.

Q. Those that went to Europe, what is your impression about them?

A. They stuck together, I believe, in hot climates, for they had not arrived at the present perfection of withstanding heat.

Q. Was not the loss of these goods in England before the failure of Mariner, Tibbets & Co.?

A. I said nothing about England. We sent them [abroad in the country. They went about to various cities, far and near.

Q. Can you speak in reference to the Chaffee machine being put in operation?

A. I remember the Chaffee machines being put up there.

Q. Wasn't it prior in date to the Chaffee machines being put in operation when these goods failed?

A. I don't know that it had occurred previously, but it was afterwards, and quite a time afterwards, when I knew of it.

Q. You were not connected with the establishment?

A. I was a stockholder, and owned property in the neighborhood. I was frequently there, but I had no means of knowing their operations, except when they wanted money out of me. I remember when I had some visits to pay, but I didn't know much of what took place inside.

Q. Don't you recollect some other losses by bad debts, to a large amount?

A. I don't remember that there were.

Q. Don't you know that the company lost nearly \$300,000 by bad debts?

A. I think they lost a very large sum by bad debts and bad management, or both; and I have a sort of impression, but I won't be positive about it, that the whole amount that was sunk there was from \$350 to \$400,000.

Q. Wasn't that principally in bad debts?

A. I don't know; it might have been. There was about a hundred thousand of it in Mariner, and say nearly half a hundred thousand in Raymond.

Q. Wasn't there a good deal of stock speculation connected with that company?

A. I should think there was. I was offered \$160 for my shares and refused it, and very shortly afterwards they were not worth 60 cents. Allow me, if you please, to express a little doubt about that. I was in another fancy affair about that time called the Malleable Iron Company, and it may have been in that I met with that loss. However, this iron company was considered a very valuable property, and I held on to my shares, and kept accumulating them until I lost all.

Q. Didn't the officers of the Roxbury company speculate largely in stock?

A. Not to my knowledge.

Q. Don't you know of their having done so?

A. I do not. If they did I never heard of it. I remember one thing about that, and that was hearing Capt. Dorr blamed for selling some [stock, and I remember defending him by saying I thought him honest, for I bought some for myself. He was a very honest man, I believe.

Q. Do you remember the subject matter to which your attention was called when you were called on to give evidence in the extension?

A. I cannot now remember.

Q. Were you employed to sustain the validity of the patent?

A. I don't think I was.

Q. Don't you ever recollect of getting a retaining fee since this India rubber litigation commenced?

A. I cannot say; some time or other a fee may have been given to me.

Q. Don't you remember a retainer directly to yourself from William Judson for any purpose?

A. In a suit?

Q. Yes, in a suit.

A. I seem to have an impression that Mr. Judson at some time paid a hundred dollars at our office, either for services or advice, or something else of the kind, while Mr. Keefe was my partner, I think.

Q. Did it not arise out of this Chaffee patent, or the desire to find those papers?

A. It might have been to compensate the effort and labor in searching for those papers. If you are anxious, when I return to my office I will see the receipt. I cannot tell you in what suit it was, if it was in any suit. When Mr. Hubbard came to me he was so confident in the matter, being employed by somebody, I don't know who, that he offered \$500 if I would devote my time to looking for those papers, and if I could not find them, that if I would go to New York and swear I couldn't find them, he would give me \$500, and I refused, and wouldn't go for any such sum.

JAMES M. PERKINS, SWORN AND EXAMINED BY MR. BRADY.

Q. You are the subscribing witness to that paper, I believe. (Paper handed.)

A. Yes, sir.

Q. Did you see Mr. Chaffee execute it?

A. I presume I did, or I would not have put my name there.

Q. And you subscribed your name to that paper?

A. I did.

COUNSEL (to the Court.) This paper is also indorsed on that paper (B) of the 28d March, 1885. This is dated the 25th February, 1887.

(To WITNESS.) Were you in any way connected with the Roxbury company in 1887?

A. I was in Mr. Savage's office, and he was president, or reputed to be president in 1887.

Q. Did you know Geo. Bradbury?

A. Yes.

Q. Is he living or dead?

A. He is dead; at least I presume him to be dead. He is reported to have died in Pennsylvania, I should think some ten or a dozen years since.

Q. Before that he resided in Boston?

A. Yes.

Q. Was he a married man?

A. No, sir; a single man.

Q. Do you know in what part of Pennsylvania he died?

A. I do not; he had got connected with some iron works there.

Q. Do you know his writing?

A. I do, sir.

Q. Is that his writing? [The vote of the Directors was produced.]

A. Yes; I should think it was.

Q. Is that the gentleman whom you understood to be President, Mr. Savage, and in whose employment you were, and Mr. Bradbury, who was called clerk; are both dead?

A. Both dead.

Q. Mr. Savage died when?

A. I should think some three or four years, or more—five or six, perhaps.

Q. In Boston?

A. Yes, sir; in Boston.

Q. Do you know the handwriting of Wm. Savage?

A. Yes, sir; I believe that to be his.

(Mr. BRADY, to the Court.) That is the paper which witness last spoke of [D], the vote of the Directors.

(BRADLEY now stated his intention of resuming that branch of the case relating to the question of novelty, which had been left off on Saturday.)

JOHN L. WALKER, SWORN AND EXAMINED BY MR. BRADLEY.

Q. Please state to the jury your place of residence.

A. In the town of Providence. I have charge of the shop of the Phoenix Iron Foundry, and have been there since 1832. I have been there since 1830.

Q. What was your occupation prior to going there in 1830?

A. I worked in Pawtucket with David Witner. I commenced in the year 1822, and continued till I came to Providence.

Q. I will ask you how long you have known calenders to be used in this community, and to describe to the jury how they were made.

(Mr. JENCKES stated that this was taken under objection as to materiality.)

A. The first common cylinder I ever saw, was in the winter of 1823. When I went to Pawtucket, there was a calender there running, in what is called the old Baldwin mill, with three rolls, two of which were of paper, the other of iron, and the iron one heated and running between the paper rolls. It was heated with heaters.

Q. Please describe how the iron one was made.

A. It was hollow, and heated with hot irons inserted therein.

Q. How long have you known of calenders made in that way, of metal, hollow, heated, and revolving upon one another, with an unequal motion?

(RICHARDSON objected to the question as leading.)

(The COURT said the witness should be asked if he had known such calenders?)

(BRADLEY then asked his question in compliance with the ruling of the Court.)

(WITNESS.) At the Bourne Bleaching House, which used to stand at the corner of Brook and John streets, and of which Samuel Dexter was agent of the concern. They there had those calenders, where they had likewise a friction calender, which gave a gloss to cambrics. That was in 1824.

Q. Describe to the jury how that friction calender was made.

A. That calender was made with an upright frame, in which the rolls worked one above another. The lower roll was a paper roll, and the head of that roll formed the gearing which gave the check to the roll. A stud-wheel placed upon the end of the frame, intersected with the iron roll, which gave the iron roll the greatest velocity on the surface, although the paper roll was 18 inches, and the iron roll was 9. They ran with a friction, or whatever a man may call it, more or less; but of this I am sure, that it went with as much friction at least as two to one, although I think it was more; but I never counted the teeth in order to ascertain.

(RICHARDSON.) What date was that?

A. 1824. After 1824 I did some repairs there, and that is the reason why I came to know of this factory. I overhauled there the old-fashioned machine which they used to have, that went with the Putnam Beam. They had one of the same description at Point Pleasant. In repairing that machine, I stopped two days after to see that every thing was working as it should do. After that, somewhere about 1825, I built a calender of the same form, only I had an iron frame in place of a wooden one. We used to call it (the old engine) the mummy calender, because the frame was of the form of the cases in which the mummies have been brought here. There were two paper rolls and one of iron in that; and with the use of this gear on the end, when they used it as friction, the top roll merely ran on the surface equal with the middle roll; but the under one was checked, so that it caused a slipping motion. The WITNESS explained farther: The upper roll, when used as a friction, ran with unequal surface motion; the reason why it was made so, was, that when they wanted to use it as a rolling calender, to run equal, this check was stopped off, and then they ran equal.

Q. Did they always use paper rolls with iron rolls in calender mills?

A. Yes, sir; for one particular set of rolls. Using the iron rolls altogether would cut the cloth. Those paper rolls that I saw in Pawtucket were made by

Nicholas Hatch, who is dead many years, and were made at David Wilkins' in 1817 or 1818, with a screw-press. The head was formed for a gear at one end, which gave a check, and there were six bolts, which went through these to give the paper its place. The heads of the paper rolls were of iron, and in one of them was a gear.

Q. I think you stated why the paper roll was used.

A. To give way to the iron, or the cloth would cut.

Q. Have you known rollers of iron running together?

A. I have seen them run together to grind rubber. I saw them grind in the spring of 1835. I stood over them, and watched their motions on the second floor of our shop. The machine was brought there in the spring of 1835, to grind rubber. The rollers were somewhere in the neighborhood of five inches in diameter. It was a light machine, and put up by order of a gentleman of the name of Millard, I think; but I never knew the name of the man who attended it. Both rolls were laid horizontal.

Q. I will ask you if you ever knew of any to be made there in that shop?

A. I have built quite a number of rubber machines, of various qualities. The first that ever I built, within my knowledge, was in the summer of 1835, to go to Staten Island. I received the order, and executed two machines, which were sent away in the fore part of that fall, I think; and I think that Marsh was the name of the man they were for. I don't go into all the minutiae of the orders executed; when work is handed to me by the agent, I execute it, and give it to him to send away. I don't pretend to know the ins and outs, the cash, and payments, and prices, or anything of the sort; but I built those two machines, and they went away during that fall of 1835, right away after this machine was being operated up stairs.

Q. Describe to the jury the machine you saw grinding rubber.

A. This (referring to a model) is a similar model of the one that Mr. Millard had at our place. It had two rolls. It was geared two to one, as this appears to be. This shaft was not in it, neither was that wheel, but these two were. But there was a pulley to move the machine, so that it gave one roll two revolutions to the others one. That was in the spring of 1835. Those that were made to go to Staten Island, were built in a similar manner, only I put the gearing on the end of the rollers.

Q. Describe how the rolls were made.

A. When we cast the rolls we generally cast them with an additional length; probably those were somewhere about thirty inches in length when finished. In order to get them sound, we generally cast a small hole through them. The gudgeons were wrought iron, which formed the beamings. When these rolls are turned and finished, the last thing that is done is to drill a hole through the neck into the body of the roll, where the hollow is.

Q. Describe how the body of the cylinder is made.

A. The body is made a round cylinder, with a hole cast through it in that manner.

Q. Those were made of what material?

A. Cast iron, all except the gudgeons, which were wrought, and put in.

Q. I think you state that you have seen India rubber put through?

A. Yes, sir.

Q. Do you know any thing about the working of those machines?

A. With regard to the India rubber manufacture, I don't pretend to know more than I have been an eye-witness to. This machine, in putting the rubber through, appeared to work very minutely. I noticed that it always warmed itself, and kept it up. Likewise, in Hartshorn's place, when Elias Hooper was there, he always warmed his machines in the same way, and I have frequently seen him stop them; I asked him the reason, and he said they were getting too hot by the friction.

Q. I don't know whether you know any thing about the machines that were made in the steam mill machine shop in the year before.

A. No, I have no knowledge of that. I know there was a machine built there, but I know not who built it.

Q. Did you see it with your own eyes?

A. I have seen it on the team that was taking it away; but as it was to pieces I could not state the form. I believe that was a coating machine, or something of that sort, as I heard say. I remember one fact in relation to those that I built to go to Staten Island, for Marsh. In his order he stated that there were two rolls wanted, of equal size and of equal diameter, with two even gears, to prevent all friction, which, I suppose, were for coating rolls. By our not executing them so soon as he wanted, we had to return his letter and drawings.

Q. All you know about the other is an order which you had no time to make?

A. Yes, sir. He wrote on expressly to say that he wanted those two rolls to go without friction at all; and, so far as I could make up my mind, these were coating rolls, and were not wanted for friction.

(In compliance with a suggestion from the Court, the witness was asked to state more fully to the jury the mode of grinding rubber.)

Cross-examined.

Q. What sort of rubber was ground?

A. India rubber.

Q. Was it hard?

A. It had been mingled with a solution of spirits of turpentine, and it did not appear to be very hard.

Q. Have you ever seen rubber put through it which had not been mingled with turpentine or solvent?

A. Not in this machine of Millard's, but I have in Dr. Hartshorn's factory since; I have been acquainted with his machine since 1842, I believe.

Q. Have you ever seen rubber put through machinery made in that same way as Millard's, without solvent?

A. I never did, without a solvent of some kind or other; either coal-tar, or turpentine, or lead, or pumice stone.

Q. Does that run with or without uneven motion?

A. This runs with an even motion.

Q. That is his spreading machine?

A. Yes, sir.

Q. So that you were required to make Marsh's run in that way?

A. Yes, sir; with even motion.

GULIELMUS B. MILLARD, SWORN AND EXAMINED BY
MR. BRADLEY.

Q. Are you the gentleman who has been referred to by the last witness and by Mr. Peters?

A. Yes, sir.

Q. Will you please state to the jury, sir, whether you ever used any machine for grinding rubber; if so, how it was made, and when you used it?

A. Yes. I used a machine in the commencement of my business in this place, very similar to this (a small model). It was two horizontal rolls. The first I used without unequal motion; then, in the process of my business with them, I found that they did not do well, and we ran them without this gearing at the end, and turned them by a hand crank. In using those, this back wheel was in a box, and it clogged. I suggested to those who were concerned with me, that we could do better with friction cylinders,—cylinders running $2\frac{1}{2}$ or 2 to 1. Consequently we had the mills ordered, and geared almost precisely like this, only they had a pulley in place of this gear; this was not here. In operating that mill we ground faster and much better. There was but one difficulty: we had to stop frequently on account of the heating of the rollers.

Q. What year was that?

A. That was in 1834.

Q. Did you use it in that way, and for that purpose, prior to its being taken down to the Phoenix Foundry?

A. Yes, sir.

Q. Please state when?

A. I don't know that I recollect the name of the place. It was down by the tide mill, near the lock, at the back of the gaol.

Q. In other places in this city?

A. Yes, in this city.

Q. Did you heat up the cylinders otherwise than by its own action?

A. No, sir; it heated fast enough.

Q. So much that you had to stop it to cool it?

A. Yes, sir, frequently.

Q. I ask you if in that way you ever put rubber into it without a solvent?

A. Yes, sir; in 1835, but not to make a business of it. It made a soft substance; but not owning any use for it, we threw it in with the rest of the rubber.

Q. What time in 1835?

A. Several times.

Q. What time did you leave in 1835?

A. The last of December; I should think it was about the 10th, not December, but September; I moved, with my family and machinery, in New Brunswick on the 1st day of October. What day I left I don't remember.

Q. Is there any difference between this and your machine; or is the difference only a different mode of applying the power?

A. Yes, certainly, the pulleys would do just as well as a cog-wheel there.

Q. Now please describe to the jury, how the cylinders were made and what they were made of.

A. They were made of cast-iron, about eighteen inches long, and not far from five inches in diameter.

Q. What persons in this city knew of its use in that way?

A. There was a great many knew of its use. There was no privacy about it at that time; when it came into my hands it was not kept secret. Mr. Fields saw it, Mr. Holmes saw it, and the witness who was on the stand (Walker) saw it, and many others also who are not living at this day. It was about twenty years ago.

Q. They saw it in operation grinding rubber?

A. Yes, sir.

Q. After grinding your rubber in that way, how did you spread it on the cloth?

A. I spread it with cylinders.

Q. Describe the mode in which they were used.

A. They were a couple of pair like that, (referring to model,) only smaller, geared with levers, as these are geared, only that the cylinders were smaller. They were about five inch cylinders, and I think they were about five feet long. There were two pair of cylinders, the frame extended, and another pair were geared in the same manner as these, and with the same levers, and the crank, passing this way, connected the cylinders. We did business in a very imperfect manner at that time, in fact it was the introduction of it into this section of the country, so it passed off to a roll, and was rolled up by another person.

Q. If I understand you, you had two cylinders at one place like these, to press the rubber on?

A. We had a pair here to receive the rubber and press it on, and another pair to smooth the surface.

Q. Then you had four cylinders for pressing the rubber into cloth?

A. Yes, sir, at that time.

Q. Please describe the material of which they were made?

A. They were cast-iron cylinders, made in a very perfect manner; we confined them together, instead of having the screws on the top, with levers and weights running out, giving the weights here and there as it was required, and according to the consistency of the composition.

Q. That was either to lower or raise the cylinders, one being on the other?

A. Yes, to make the work heavier or lighter just as they do now, only with screws.

Q. After the rubber was prepared with your machine in that way, you then spread it with these four cylinders?

A. Yes, sir.

Q. And your cloth or apron running from one set of cylinders to the other?

A. We had no apron; we merely used the cloth; we had a beam standing here, with a pulley on the end, and string and weight, rolling the cloth on this beam, and running across here.

Q. Where did you get the idea of these machines, the grinding machine and the other?

A. These were my own ideas, I never saw one. The first that ever I saw was the single pair of cylinders, when I commenced business first in this place over the store of Potter & Davenport. The commencement was with a pair of wooden cylinders, with a windlass to turn by hand, taking one spoke and then the next, and so turning it round. From that, when it did not answer, we ordered one to go with gearing more equal.

Q. With whom were you connected here in this business?

A. Well, I had attempted to be connected with several. I have never had any connection with any one by name. I commenced with a man of the name of Pike, Samuel Pike.

Q. Was he of this city?

A. He was of this city. Then Mr. Joseph Briggs came in; he is not living. Then Mr. James Brown; he bought out Mr. Briggs, and bought all the fixtures and machinery. He and I commenced the business together, not as partners, but if there was any thing made, I had so much of an interest.

Q. The business of India-rubber in this country was in what condition at that time?

A. Very miserable I should think.

Q. Just the starting of it?

A. Just the starting of it.

Q. When you went from heré, I am reminded to ask you, you went where?

- A. To New Brunswick, New Jersey.
- Q. Have you continued in the rubber business since?
- A. Until 1852.
- Q. What kind of machinery did you use?
- A. I continued the same kind of machinery, only heavier.

Cross-examined by Mr. Richardson.

- Q. Who were you in business with in New Brunswick?
- A. When the machinery was built?
- Q. When you stopped business in 1852.
- A. I was in business with myself.
- Q. Have you been in company with Hiram Hutchinson?
- A. No, I worked in his establishment for about five years.
- Q. When did you commence?
- A. I commenced October, 1835.
- Q. As the foreman of Hiram Hutchinson?
- A. Yes.
- Q. And continued for how long?
- A. For about five years.
- Q. Did you carry that machine that you had in Providence to Hiram Hutchinson's establishment?
- A. Yes, he bought it from me; he saw it running, and carried it away there.
- Q. Did you use it there?
- A. I did.
- Q. How long?
- A. A very short time after I got there; I think till May, 1836.
- Q. Then you had new machinery made?
- A. Yes, sir.
- Q. It had a wooden frame?
- A. Yes, a wooden frame.
- Q. Had it wooden side-pieces?
- A. All wood but the rollers and the gearing and the driving-power. We had iron boxes and iron screws.
- Q. Did you drive it by hand or horse-power?
- A. At first by horse-power.
- Q. How did Hutchinson dissolve his rubber when you first went there in 1835?
- A. He did not dissolve it at all.
- Q. How much spirits did you put with it?
- A. I don't recollect particularly. I know that at that time our machinery was very weak indeed, and we were obliged to use more than was requisite—more than we used afterwards when we got other machinery.
- Q. In May 1836?
- A. Yes, sir.
- Q. Did you not use more than three quarts of spirits of turpentine to the pound of rubber.
- A. Oh no, sir.
- Q. Not more than three quarts to the pound?
- A. Not for mixing cloth rubber, we used more for cement.
- Q. How much for cloth?
- A. I should think, according to the best of my recollection, that I used two quarts to the pound.
- Q. How did you put it with the rubber, did you cut the rubber up?
- A. Sometimes we did, and sometimes we did not. That depends on the kind of rubber we used.
- Q. What kind did you cut?
- A. If it was bottle rubber we cut it, if it was shoe rubber we cut it up. The top rubber that was cut off the shoe we warmed and put to grind.

- Q. Did you not let it stand in tubs?
 A. Yes.
 Q. How long did it stand there?
 A. We used to put it in during the night and take it out during the morning.
 Q. What time at night?
 A. We did not work late at night, we tried to economize as much spirits as we could.
 Q. You had a horse power there for those two rollers?
 A. Yes, a horse power. The mill was small, and what we attempted to do we could do to pretty much perfection.
 Q. Did you not always let it stand more than one night?
 A. I cannot answer that. We used to let it stand just until it was convenient for us to grind it. Sometimes what we commenced grinding to-day we had not finished till another day, and the rubber was let stand until it was needed.
 Q. Was it not necessary, or did you not actually let it stand in three days?
 A. No, it was not necessary, one day was enough.
 Q. Can you give precisely the date of the manufacture of that new machinery of Mr. Hutchinson?
 A. No, I cannot, it was received some time in May.
 Q. Where was it received from?
 A. From New York.
 Q. Do you know where it was made?
 A. Yes.
 Q. Where?
 A. It was made in Elizabeth street.
 Q. What was the size of those rolls?
 A. I don't know whether it was eight or ten inches, but it was one or the other, it don't occur to me which.
 Q. Those had cast iron frames.
 A. Yes.
 Q. Where is Hiram Hutchinson now?
 A. I don't know.
 Q. Did you hear him when he testified in relation to his business in 1836?
 A. I never heard him give testimony.
 Q. You were not present when he testified?
 A. No.
 Q. What did you make here in Providence.
 A. Not much of anything, we spread some gum on cloth and made some clothing.
 Q. Where did you do that?
 A. We did it in two places—we did it over the market, up in North Main street, and at the new market, on the junction of the two roads.
 Q. How much did you sell? How much was the proceeds of your sales?
 A. Well we sold it all, I don't know how much, to one man, James Brown.
 Q. Did it come to \$20?
 A. It was.
 Q. \$30.
 A. I should think very likely.
 Q. Will you testify that it was more than \$30?
 A. I cannot tell the amount.
 Q. Had Hutchinson some rollers in New Brunswick, when you went there, beside these?
 A. No.
 Q. Not any rollers in his place?
 A. I do not know, it never came to my knowledge. There was not a roller in New Brunswick, or in the State of New Jersey, when I went there.
 Q. Was Hiram Hutchinson then manufacturing?
 A. No, he commenced there when I went there with those rollers.
 Q. Now state all the machinery you took there.
 A. I took that spreading-mill, and that grinding-mill, and the rolls.

Q. What had you to scrape the rubber from the rollers?

A. A knife.

Q. A doctor it was called?

A. That is the name they gave it after I called it a scraper.

Q. They were used to scrape the rubber off the rolls?

A. When they were grinding.

Q. Will you state to the jury how that doctor was made in your rolls that you used at New Brunswick?

A. These rolls were set in a wooden frame, or a wooden box, and a hole was morticed through, and a knife screwed upon wood that passed through it, and the knife was raised or lowered by means of wedges, put upon each end of it; it was not regulated by screws as was the case afterwards, it was a simply constructed machine, and was made for an experiment.

Q. At what date did the doctors go out of use?

A. I do not know; they did not go out of use with me at all, sir—never.

Q. How long did you continue in the business?

A. I continued from '84 till the winter of '51-2.

Q. Did you use doctors in your machines in 1851-52?

A. Always.

Q. Where?

A. I used them in New Brunswick.

Q. In what factory?

A. It was a factory that I owned, where did I last say?

Q. You said New Brunswick?

A. Rahway was where I manufactured last, where I closed my manufactory.

Q. These doctors the original of which you had in Hutchinson's factory were made very thin?

A. No, they were very heavy.

Q. How were they made?

A. Made in a manner similar to what I have described, only they were set in a frame.

Q. Those used in the machine that you carried over?

A. As I told you that was a knife running under one of the rollers. As the composition passed through, the knife took it and threw it down into a vessel.

Q. Well, that was a thin knife, was it not?

A. I don't recollect, I think it was nothing heavier than a piece of hoop-iron fastened upon wood.

Q. Wasn't it the same thing as the calico-printers use?

A. I am not able to answer you.

Q. You don't know?

A. I do not.

Q. You are not a machinist?

A. I am not.

Mr. BRADLEY. I understood you to say that you were the first to carry the rubber manufacture, so far as you know, into New Jersey.

A. Yes, sir, dissolved rubber to put upon cloth.

Q. Had any person been engaged in that business here in this city before you, to your knowledge?

A. Mr. Pike. I bought in with him, it was the same year, the same season.

Q. You stated that in May 1836 (your Honor will bear in mind that the date of the Chaffee patent is August 1836), you had some larger machines made for Hutchinson in the same way, but heavier?

A. Yes.

Q. Did you introduce steam into those?

A. Yes.

Q. Did you make any change in the mode of using that machinery, except to increase the strength of it, and thereby decrease the amount of solvent?

(Mr. RICHARDSON objected to the question as leading.)

Mr. BRADLEY. (To witness.) How did that machinery differ from the preceding, and for what purpose was the difference made?

A. We had a grinding-mill and a spreading-mill, they were both about of a size, but I don't recollect whether the diameter of the rollers was eight or ten inches. The spreader was of the same length as this other mill that I spoke of, the four-rolled mill.

Q. I want to know whether, when you altered your machinery, you increased or decreased your solvent.

A. In the winter of 1835, after I went to Hutchinson's I found a great difficulty in spreading the rubber, and I told him it would be necessary to make some arrangement by which to get heat into the cylinders.

Mr. RICHARDSON. When was that?

A. That was in the fall of 1835.

Mr. BRADLEY. Did you send an order then?

A. Mr. Hutchinson immediately ordered a calender, as he called it (at that time it was a spreader), and had it prepared for steam.

Q. You called it a spreader before, and after having this heater introduced you called it a calender?

A. We used it for both to spread and calender. We had to calender our cloth after it dried.

Q. After you made your machinery did you increase or decrease the amount of solvent?

A. We decreased it.

Q. Have you or not always continued to use some solvent in connection with the machinery?

A. I have always done it. I pursued that till I stopped business in that kind of work, putting solvents into any rubber, more or less.

Q. Is it, so far as you know, the practice in the rubber business to use some solvents in connection with the business?

A. I don't know. I never informed myself much about any other business but my own.

Q. Was the amount of solvent increased or decreased in proportion to the strength of the machinery?

A. To be sure, that was the object. When we grind it without solvents we could make it much quicker and finer.

Q. Were you a witness upon the application for an extension of this patent?

A. No.

Q. I will ask you if either Walker or any of these Providence witnesses were witnesses upon that occasion?

A. No, sir.

Q. And your discoveries were not made known to the Commissioner of Patents?

A. No.

Mr. RICHARDSON observed, that the fact was, Hiram Hutchinson was called on that application for an extension in relation to all this machinery from beginning to end.

GEORGE B. HOLMES, SWORN AND EXAMINED BY MR. BRADLEY.

Q. I will ask you, sir, if you were a witness upon the application for an extension of Chaffee patent?

A. I don't recollect that I was.

Q. If you had been you would have recollected it?

A. It is very likely.

Q. Was Mr. Peters or Mr. Walker?

A. No.

Q. What is your residence and occupation?

A. I have charge of a machine shop in Providence.

Q. For how many years?

A. Nearly twenty-one years.

Q. What was your occupation prior to that?

A. A furnace-maker.

Q. State to the jury how long you have known calenders, as they are commonly called, to be used in this community, and how they are made.

A. I have known calenders ever since '24 or '25.

Q. How are they made?

A. They are made similar to these mills here.

Q. Of what material?

A. They make them of iron and paper rolls, sometimes they have wooden rolls.

Q. Heated or otherwise?

A. Both.

Q. When did you first know of your own knowledge of any such machines being used in connection with the manufacture of rubber in this city?

A. The first that I knew was one that Mr. James Brown brought to our shop in the spring of 1835. He wanted the privilege of running it there; it was granted and he ran it.

Q. State the kind of machine and how it was used.

A. This was the kind of one (referring to one of the small models); he attached a belt to it and ran it through. I don't know the practical operation of working rubber. I have seen the operation, casually looked at it, but I cannot give any practical knowledge of it.

Q. Have you seen rubber go through?

A. Yes, similar to this in our own shop.

Q. As early as—

A. As the spring of 1835.

Q. It was there for that purpose, and used for that purpose, only so far as you know?

A. Yes, that is all.

Q. You had charge of the whole building, and knew what it was used for?

A. Yes.

Q. And power and rooms hired for that purpose?

A. Yes.

Q. Of you as agent of the company?

A. Yes.

Q. How long was it there?

A. I don't know; it might have been in June, and it might have been in July.

Q. Have you ever had any machines made at that establishment for rubber purposes?

A. Yes.

Q. If so, what was it and when was the earliest?

A. I made machines similar to this, with the exception that that under-roll was not in there, but two rolls, like these, geared together here.

Q. Is there any difference in the machines except a different mode of applying the power?

A. No difference but that. I have made one on September 23d, 1835, also in October, 1835, and April, 1836, for Samuel Marsh, (India Rubber Cloth Co.)

Q. Do you mean that you made them at that time, or sent them off at that time?

A. That was the time I changed them; my order was before.

Q. What was the date of your order?

A. The order was dated New York, August 12, 1835.

Q. Is that an order for these machines, or for another for the same man?

A. It is an order for these, and for two other rolls, that we did not do.

Q. Describe how they were made.

A. They were made with these two rolls, and with two gears on here, to make them friction rolls, and an extension on this one for a belt, for a pulley to go on it to drive it.

Q. Of what material?

A. The rolls and gears were iron, and the frames I think were wood, with screws on them, like these, to adjust them.

Q. State how they ran upon one another with an equal or unequal motion.

A. Two to one. I believe they were friction rolls, one moved faster than the other.

Q. Were they hollow, or were they solid?

A. They were hollow. The one that was brought there in April was cast hollow, with heads put into it. I think afterwards we cast them hollow, with two small holes in the end. (Here an order for machinery was read, to which Mr. Richardson, after he had looked at it, said he had no objection.)

Q. You stated that the portion of the machinery mentioned in that order you did not make; state what you did not make.

A. The two last I did not make; we were so hurried that we could not make them.

Q. Those were of equal motion, Do you know the object of that?

A. They were for coating.

Q. I will ask you if this spreading machine of Dr. Hartshorn is of equal or of unequal motion?

A. I don't know. I have not seen it.

Q. What do you say about this model?

A. I should think it would be even if the wheels are alike.

Q. The machines you sent on there were of unequal motion?

A. Yes, friction rolls two or thereabouts to one.

Q. Now the rolls you could not make on this order were of an even motion?

A. Yes.

Q. But those you made and sent on for grinding were friction rollers?

A. Yes.

EDWARD FIELD EXAMINED BY MR. BRADLEY.

Q. You reside where, sir?

A. In Cranston.

Q. How long have you resided in Cranston, in the vicinity of Providence?

A. I have lived in Cranston about six years.

Q. Do you know any thing of some machinery used in this city in 1834-35, in connection with rubber?

A. I came to this city from Pawtucket in the north of Providence, in the year 1828, and was engaged in the manufacture of machinery fifteen years. As nigh as I can recollect, in 1834 I was asked by Millard, the gentleman who has been upon the stand, to take an interest in the India rubber business with him. Another gentleman of the name of Pike, I understood, at the time was concerned with him, at any rate in the business with him some way. To satisfy myself in relation to it, I went with him to his place of business, and they showed me the cloths that they had covered with rubber, and also the machinery or part of it, and tried to encourage me in all ways to take an interest in it. As nigh as I can recollect, it was in 1834.

Q. What place was it—where was it?

A. It was in South Main street, a building owned, and, I believe, part of it occupied by Potter and Davenport.

Q. You recollect the consistency of the rubber they showed you at that time, was it liquid or dough?

A. I should think that that which they showed me, which they stated was prepared to be put on cloth, was about the consistency of bread that was kneaded for family use, for baking flour bread, white bread, rather softer, if any thing, but as near that as I can recollect.

Q. How was it prepared through the machinery?

A. I cannot recollect any particularly about that I saw in a tub in about that state. It seemed to have been colored with something of a dark color.

Q. Was the machinery made of rollers, or what was it made of?

A. Well, my visit was short in Main street, and the machinery which I did see is not so clear upon my mind as it was when I saw it by going to their shop, while it was in the chambers of the market up here at the junction of the streets which is called Constitution Hall, in the second or third story of that building. I took more particular notice of their machinery there—at any rate of part of the machinery, and I have no recollection at all of seeing a grinder for rubber at that place; but I recollect particularly a spreading machine for spreading on the rubber. The machine was not in operation to the best of my recollection; but the cloth that they were spreading was on the machine, and the rubber upon the cloth. That is to say, that so far as the head of the machine was concerned, it was similar to this (pointing to a large model), and the cloth of the calender passed through, running over something to keep it up, a friction roller or ———, and brought it horizontally into the rolls. The rubber lay upon the cloth and against the rolls, and passed through and off and round something else, which I did not notice. At any rate, I did not see any thing but the principle of it, and that was not uncommon at all. It was perfectly familiar to me. So far as the operation was concerned, I did not take a great deal of notice of it. It was so similar to dressing machines that I built a great many of that I noticed, but very little that part of it.

Q. Have you been a machinist, Mr. Field?

A. I worked at it something like twenty years.

Q. How long have you known machinery of that to be in use in the arts?

A. It was very similar to a machine that we called a dressing machine for stretching the yarns as they passed through.

Q. Describe that, if you please.

A. As far as one end of the machine is concerned, in stretching it is the

same as this, but in that case there is a trough underneath, which holds sizing and the roll takes that up, and applies it to the yarn.

Q. How long have you known those machines to have been used?

A. Twenty-four, certain.

Q. Do you mean so far back as the year '24, or 24 years?

A. I mean so far back as the year '24. I think that they made machines in, I should feel safe in saying, the year 20, but I am very confident that I have seen the machines so early as '24.

Cross-examined by Mr. Richardson.

Q. Did you ever see any rubber, sir, after it was softened by process, and before it was colored?

A. Yes, sir.

Q. You said this rubber you saw in the tub was black, do you know of any substance that was put in it to make it black?

A. I did not.

Q. What did it look like?

A. My impression of it was, that it was lampblack.

Q. You say you saw some spreading machines there in which the rubber was spread on the cloth, like a dressing or stretching machine. How did the rubber get on the rolls—by what process?

A. It was laid upon the cloth.

Q. How did they put it on?

A. I did not see them put it on; I saw it lay upon the cloth, and against the upper roll.

Q. There was a box under it, was there not?

A. No.

Q. Was there a box at each end?

A. I don't know as I understand you. There was a box at each end that held the rolls—but I don't know what you mean by a box.

Q. A box or trough?

A. There was no trough.

Q. What was at the end, to keep the rubber from going over the edge of the cloth?

A. I did not notice that.

Q. I think you said that was in the year 1884?

A. Yes, sir.

Q. You are not very certain about that?

A. Yes, I am.

Q. How?

A. I am very certain.

Q. What means have you of refreshing your recollection about it?

A. I have nothing better than the fact that I was to work in New York in 1885, and I think that it was in 1884 that I saw this.

Q. You only saw one machine there?

A. Only one.

Q. That is the one you have described?

A. Yes, sir.

Q. They exhibited to you their whole works, did they?

A. Well, I presume they did, all they had on the premises at that time.

Mr. BRADLEY. When you spoke of seeing but one machine, where did you refer to?

A. The chamber, in the New Market.

Q. How was it in the other place?

A. I did not take particular notice, or rather I cannot recollect.

Q. You cannot recollect what they had down at that place?

A. No, sir, I cannot.

Q. Was that the place they took you to show you the operation?

A. It was.

Q. Had they this room up town at that time?

A. Not to my knowledge.

Mr. RICHARDSON. You never saw but one machine that you recollect at that time?

A. At that time I did not.

Mr. BRADLEY here announced his intention of calling no more witnesses in direct reference to the use of that machinery in the arts, prior to its application to the manufacture of India rubber.

ARCHIBALD HOYT EXAMINED BY MR. BRADLEY.

Q. Where do you reside, Mr. Hoyt?

A. At Troy, New York.

Q. I will ask you if you had any connection with the rubber business prior to 1836, if so, state when and where?

A. My first connection with the rubber business was in the early part of January, 1835; with the Boston India rubber Manufacturing Company. I think that was the name of the company. It was an incorporated company; I think the title might have been Factory Company.

Q. State whether you used any machinery at that time in connection with the rubber, and if so, state the kind of machinery and the mode in which it was used?

A. Mr. Golding—Sherman Golding, I think, was employed by that company. He carried on business at what was called the Neck, near Roxbury Line. He had a machine there. The first machine he got up was a pair of iron cylinders to grind rubber.

Q. Please describe how they ran the one to the other.

A. They ran with unequal motion; I should think about 8 to 1. They were geared together so that one ran much quicker than the other. It gave a sliding motion.

Q. Were they used in connection with rubber, to your knowledge?

A. Mr. Golding commenced using them in February, and used them for some time; but they did not operate to his liking, and he laid them on one side, trying to get up something else.

Q. Where did he operate them?

A. In his machine shop in the Neck.

Q. What material was made in them, if any, and if so, where?

A. They remained in Mr. Golding's hands, and were not the property of the Company. The Company employed him to get up other machinery that would better satisfy him. They were laid aside till the fall of 1835, when the factory removed to South Boston, and there we used the machinery that Golding got up for us. Soon after, I called on Mr. Golding to borrow these rolls, and obtained them, and with these rolls arranged a machine whereby to test some experiments that I had been trying for grinding rubber, and for coating cloth. It was one machine, intended for softening the rubber and grinding it, and applying it to the cloth, all in one operation.

Q. Please describe it.

A. The machine part of it was precisely arranged as this is, only at the top part of it there was a box that was run by gears and belts, whose shafts ran through it horizontally, and in those shafts were irons playing through one another. These irons operated through one another in that way, which created a friction, and heated up the rubber in this box, which was independent of the rolls, and set over them. By putting in a small amount of solvent, we could soften that rubber so as to prepare it for the cloth. These rolls had shafts running through them, and they were set in motion by gears and belts. Then, perhaps in three hours, that rubber would become sufficiently hot to be one mass of one consistency. We then turned this box bottom upwards (the bottom was made corresponding with the shafts revolving), and the rubber would settle out gradually on to these rolls, and then these rolls were set in motion; the rubber was scraped off from the quick roll, and fell directly on the cloth, which passed over a roll laying at the bottom, similar to this; there the cloth received the rubber. We used that machine in that shape to test the principle, and immediately went to work to construct the larger machine, which has continued in use up till the present day. That larger machine was made in the spring of 1836, and was sold to the Troy Co. They discontinued business soon afterwards, and I took it back into my own hands, and have operated it ever since. I always found a difficulty in these rolls becom-

ing too hot. I endeavored to obviate that by boring holes in the ends, to produce ventilation, still that was hardly enough, and we had to cool them with water.

Q. How did you apply the rubber to the cloth?

A. We commenced it first by using two cylinders. As I mentioned, Mr. Hale arranged two cylinders to spread the rubber; we tried it in different ways, and finally laid aside one of the cylinders, using in its place a gauge, which was graduated to the roller by set screws; and for the work which I had done there, and have done since, it has answered ever since with me.

Q. The cylinders with which you ground the rubber were of unequal motion, and of iron, you say?

A. They were eleven inches in diameter, and of unequal motion.

Q. They were of what material, you say?

A. Of cast-iron, hollow, turned, with holes in the ends, to let the shaft through them. We had to bore holes in the end to admit ventilation.

Q. In getting up that, had you heard of Mr. Chaffee?

A. I might have heard of his name, but I was ignorant of his machine. The idea was suggested to me by the rolls that Mr. Golding set up.

Q. That was the beginning of the account with this Boston Company?

A. Yes; that was the beginning of the account with them; the Roxbury Company had been in existence previously.

Q. What about the Troy Company?

A. In the spring of 1886 I was on there to see them; they had been burnt out, but they had been in operation previously.

Q. You say you used this cylinder in your machinery up to this time. Have you ever ground rubber without solvent?

A. I never used rubber without solvent, for I did not think it for my interest to use it; yet I have ground it without solvent. I know the question was discussed in getting up this machinery in Boston, but for all the purposes for which it was then used, I do not think it was judicious, nor for the kind of work that I am now doing.

Q. Did you make any goods for this Boston Company?

A. The Company did.

Q. You have made goods in Troy; I suppose that is your business?

A. Yes, sir.

Q. I understand you to say that you have, on occasions, ground rubber through machines without solvents, which you did it for your interest to do in that way?

A. Yes, sir.

Q. Was this known, or unknown to other people?

A. I cannot say how far it was known. I know that the rollers were there in Mr. Golding's shop, and the men engaged there knew all about it. There was no secret about it; they were laid out in the shop, and every one had access to it.

Q. And so with your own machine?

A. Not while I was getting it up. While arranging it, I had a room to myself. Mr. Hale and myself attended to it.

Q. But when you had arranged it, was the operation secret?

A. We did not consider there was much secrecy about it.

Q. Did you ever apply for a patent?

A. No, sir. I know the subject was talked of. Mr. Hale suggested the propriety of getting a patent, and I said to him that I thought there was nothing about the machinery that would make it patentable.

Q. I believe you stated you found no trouble in heating this machinery—in having it warm enough?

A. My only trouble has been to keep it cool.

Q. What have you done to keep it cool?

A. We have drilled holes through the heads of each cylinder, four holes in each head, so as to give a circulation of air through them; and if that is not sufficient, we have frequently, when grinding out the rubber, to apply water to it, to prevent it taking fire.

Cross-examined by Mr. Richardson.

- Q. What were the sizes of those rollers in the Pitt street factory ?
A. I don't know.
Q. The first factory that you was in ?
A. It was located on the Neck. The factory was not located there, strictly speaking. They employed Mr. Golding, who was located there, to get up this machinery.
Q. Where did they use it ?
A. Mr. Golding used it at what was called Boston Neck, near the Roxbury line.
Q. That was an experiment, was it ?
A. Yes, sir.
Q. Then the rolls were laid aside ?
A. Yes ; laid aside.
Q. What sort of solvent did they use there ?
A. Spirits of turpentine.
Q. Was it rectified ?
A. We did not know rectified spirits then ; it was the white spirits, which was the same thing.
Q. Was n't there "No admittance" over the door ?
A. I suppose there was.
Q. Did not your hands give bonds that they would not discover ?
A. I think they did.
Q. \$1,000 bonds ?
A. It may have been so.
Q. Did you not testify on the extension ?
A. I think I did.
Q. Did you not there fix '34 as the time in which these transactions took place ?
A. I cannot say ; but I had that impression on my mind up till last week. Now I have been led to think it was in '35.
Q. Who was present when you were examined ?
A. I could not say any further than that Mr. Day, who is by your side, was.
Q. Did you ever build any other machine than this one ?
A. For the rubber business ?
Q. Yes ; I mean in 1836.
A. No, only this one.

DANIEL H. STONE, SWORN AND EXAMINED BY
MR. BRADLEY.

Q. Have you ever been connected with the rubber business prior to 1886?

A. I was engaged in it as early as the summer of 1885; I commenced in July, 1885.

Q. Where?

A. At the city of Troy, State of New York.

Q. In what capacity were you connected with the business?

A. I was general agent for a company that was there being formed,—an association of gentlemen.

Q. You were agent for a company that was forming for that purpose?

A. Yes.

Mr. JENCKES here interrupted the examination, and said that in the notice Troy had not been named in connection with the name of the witness.

Mr. BRADLEY said that if that objection were insisted on, then the witness would be examined as an expert.

The last question was again put.

A. I stated I was general agent of an association that commenced, in July, 1885, to manufacture India rubber.

Q. Well, sir, did you build a factory to manufacture India rubber?

A. Yes.

Q. And you were general agent of the business?

A. Yes.

Q. The same as Mr. Hoyt spoke of?

A. Yes.

Q. I ask you to tell the jury whether the application of iron cylinders, revolving with unequal motion, to rubber, was a novelty in the manufacture of the article at that time or not?

Mr. RICHARDSON objected, and the Court ruled the question inadmissible.

Mr. BRADLEY. I will ask him, from his knowledge of the arts, and will take his opinion as an expert, whether the application of such a machine as is used by Dr. Hartshorn, and claimed by Chaffee, to India rubber, was so far a novelty that it was claimed as patentable at the time of its introduction?

Mr. RICHARDSON. That is highly objectionable.

Mr. BRADLEY. I will ask you, sir, if you have ever visited Boston in connection with that business?

A. I did.

Q. Then I will ask you what you know of the use of rubber machinery in manufacturing rubber in Boston?

A. I saw in Boston the Roxbury machine, and the one described by Hoyt, both.

Q. I will ask you to state what difference, if any, was between the machines, and for what purpose you went to examine both of them?

A. I went with the view of purchasing on behalf of the company; I and Mr. Norton, who was one of the associates, were sent for the purpose of purchasing one of the machines, which we did.

Q. You state you purchased one. Tell us why you did not purchase the other?

Mr. RICHARDSON objected, and the Court limiting the question, elicited this answer:

A. I saw them both in operation; the Hoyt in operation, that I purchased, on one day, and the Roxbury Chaffee machine on the next day.

Mr. BRADLEY. Please state to the jury the difference in the mode of their operation, if there was any?

A. There was no difference in principle; but the Roxbury was a much larger and heavier machine?

MR. MILLARD RECALLED, AND EXAMINED BY MR. BRADLEY.

Q. You made a statement yesterday which you wish to correct; please state what it was.

A. In reference to whether I had ever been in partnership with any one; I now recollect that about two years of the time I have been engaged in the rubber business, I was a partner. I said I had not been in partnership with any one.

Q. (By Mr. RICHARDSON.) You never was a partner with Hutchinson?

A. No, sir.

Q. Have you ever ground raw rubber by grinding-machines, and spread it upon cloth with a calender?

A. I have.

Q. What is the condition and character of the rubber thus prepared and applied?

A. All that I ever did has decomposed.

Q. Was it of any mercantile value?

A. I should think not. I think it was used immediately for lining; where the two rubbers came in contact with each other it might stand for a while; but I rather question that. I recollect of manufacturing several pieces in Providence that looked very well indeed, and when I took it out over to Elm street, and we undertook to use it for linings, it appeared very well for a time, but then it rose separate from the cloth—it had decomposed.

Q. How upon exposure to the sun?—how long would it stand?

A. In a very short time it will become soft like tar.

Q. How much time?

A. I think in two days, at this season of the year, where the sun comes upon it brilliant.

Q. You stated yesterday that the spreading-machine you had made had four rollers, two at one end and two at the other; were these solid or hollow?

A. Hollow.

Q. Did you bring these four rollers together at any time?

A. Not these four.

Q. Any rollers?

A. We set up the larger ones, of eight or ten inches, in Hutchinson's establishment, and run them together for convenience.

Cross-examined by Mr. Richardson.

Q. You speak of the rubber you manufactured?

A. Yes, sir, in part.

Q. What do you mean by that?

A. I mean that rubber, without any composition, any further than spirits turpentine, that I always used, will decompose. I have tried it of the pure rubber, and that is decomposed.

Q. When did you try it?

A. I do not recollect what time.

Q. You mean you tried the rubber without any ingredients—pure rubber?

A. Pure rubber.

Q. Without lampblack?

A. Without lampblack.

Q. You don't know when you did?

A. I do not recollect the time.

Q. Without any solvent?

A. Without any solvent.

Q. You have nothing by which you can fix the time?

A. It has not occurred to me at this moment.

- Q. In all your manufacturing for market you used these solvents?
 A. Yes, sir; I made the black gum for carriage tops.
 Q. With lampblack?
 A. With lampblack.
 Q. What quantity?
 A. I have used all quantities.
 Q. For the last eight or ten years?
 A. I have used for the last three years two pounds to one of rubber?
 Q. Does lampblack harden the rubber?
 A. Yes, sir.
 Q. Does it make it more consistent?
 A. Inasmuch as rubber of itself is inclined to decompose, the lampblack sets it, sustains it, and makes a hard substance.
 Q. You said you sold it to James Brown?
 A. No, I bought it of him.
 Q. Is he living?
 A. He is, in Boston.
 Q. You have not seen him here?
 A. I have not.

Direct resumed by Mr. Bradley.

- Q. Did you have your grinding machine when you were this side of the river, in that chamber?
 A. Yes, sir.
 Q. Have you made some sample of the raw rubber with this machinery?
 A. Yes, sir. That is a sample (exhibiting a sample) of pure rubber without a solvent or any thing in it, spread upon cloth and decomposed.
 Q. That was made last night?
 A. Yes, sir.
 Q. Have you made some vulcanized rubber?
 A. There is a piece of vulcanized rubber, and there is a piece that is not decomposed.
 Q. The three samples were made by you?
 A. No, the vulcanized was not.

Re-cross-examined by Mr. Richardson.

- Q. You say one of these samples is without any solvent—raw rubber?
 A. Yes, sir.
 Q. The other is raw rubber, and a solvent?
 A. You misunderstand; there are but two samples there; there is but one piece; I made both of these—one that is decomposed, and one that is not.
 Q. How was it decomposed?
 A. With heat.
 Q. That is to say, you have exposed it to heat since it was made?
 A. Yes, sir.
 Q. They are both made without any compound?
 A. Yes, sir.
 Q. Does the solvent help it at all to prevent it decomposing?
 A. No, sir; it would decompose it rather quicker.
 Q. It will dissolve rather quicker with turpentine?
 A. Yes, sir; it will decompose *through* quicker. Where there is turpentine, when it commences it goes through the thickness of it; where it is pure rubber, it decomposes on the surface. The surface may be decomposed when the body is strong and elastic.
 Q. Then the solvent did not prevent decomposition at all; it was the other mixtures?
 Mr. BRADLEY. We only claim that your manufacture failed.
 Q. (By Mr. JENCKES.) This machine in the market-house factory was turned by hand?

A. We did turn it by hand. I would not be understood that I ground rubber by hand without a solvent or composition. I have ground rubber without a solvent.

Direct resumed by Mr. Bradley.

Q. Did you hire power to turn it?

A. I did afterwards.

Q. And when you had it turned by power and it got heated, did it or not carry rubber through in which there was no solvent?

(Objected to as already put.)

PETER. C. ONDERDONK SWORN AND EXAMINED BY MR. BRADLEY.

- Q. What is your occupation, and where is your residence?
 A. My residence is in New Brunswick, N. J. I am not doing any thing.
 Q. Were you in New Brunswick when Mr. Millard brought on his machines from Providence?
 A. I was.
 Q. You have heard Millard's statement about it?
 A. I have.
 Q. State what the machines were?
 A. The rollers were as he described them—two small ones, five inches in diameter; the length I do not distinctly recollect—18 or 20 inches; they were hollow, and moved with a slipping motion of two to one. The machinery he brought there, when I entered into partnership with Hutchinson; I found it there.
 Q. How early did you know of its being there?
 A. That was October, 1835.
 Q. They were made of iron, and for grinding rubber?
 A. Yes, sir.
 Q. Have you continued to use the same kind of machinery in that business? or how does it differ, if at all, in character from the machinery which Mr. Millard brought there?
 A. I have been in the business for three or four years past, and all the machinery used for grinding was pretty much that same character.
 Q. In what respect did it differ?
 A. The grinding mill that we use now has a double gearing; that was geared with a pulley; and at that time we had eyes or scrapers, which we do not use now.
 Q. Do you use guides now in the grinding-mill?
 A. Simply to keep it out of the oil—to keep the gum on the rollers.
 Q. When did you introduce steam for the first time into these machines?
 A. We never introduced steam into the grinding rollers.
 Q. What did you introduce it into for any thing?
 A. Into a pair of calenders that we got in New York, which was put up on the 1st of June, 1836.
 Q. Did Millard bring on any calender there?
 A. He did—four small calenders of four rollers.
 Q. He brought them for spreading as well as grinding?
 A. Yes, sir.
 Q. How did these resemble or differ from the machine you have used for the same purpose?
 A. They had smaller rollers, and I suppose they were about five or six inches longer than those we now use.
 Q. As you increase the size and power of your machine you diminish the amount of solvent?
 A. We do, most certainly.
 Q. Is that the only change produced by altering the power?
 A. That is the object in altering the machines.
 Q. You make them stronger?
 A. Yes, sir.
 Q. Did Mr. Day ever show any thing to you about this machinery, and if so, what?
 A. He did. We had this spreading-mill, which Millard brought there in the first place, and then we got one made in New York with two cylinders, into which we introduced steam. I do not distinctly recollect the time we used that. It was between 1846 and 8. We wanted a new machine, and Mr. Day had a machine pretty much upon this principle—equal motion, three cylinders into which steam was introduced.

Q. (By Mr. JENCKES.) When was that? before 1849?

A. Yes, sir.

Mr. JENCKES. Then we object to this evidence as irrelevant, being prior to the extension; question argued; objection overruled.

Q. You will state what the machine was of which Mr. Day was speaking, and what Mr. Day said about it?

A. It was a three roller calender. I do not recollect the dimensions exactly; I suppose 15 or 18 inches—with an equal motion, into which steam was introduced, with which he was spreading the gum upon the cloth. We wanted to get a new machine, and I think he invited us to go around and see his. He said to me, "I have got the patterns of this machine, I am father of it, and if you have a mind to have one cast after my patterns it will save you so much money, and you can do so." After looking at the machine I accepted his offer and got it cast in New York.

Q. Did he say any thing about what was sufficient for him?

A. He said it was honor enough for him to be the inventor of the machine; he seemed to boast of it, and gave that as a reason why he would loan it to us, or let us have it without any charge as he said at that time.

Cross-examined, by Mr. Richardson.

Q. How much rubber stock do you own now?

A. 100 shares.

Q. How much are they worth a share?

A. That might be a matter of opinion; the par value is \$100.

Q. What do they sell it for?

A. \$285 to \$300.

Q. In what company do you own stock?

A. In the New Brunswick India Rubber Co.

Q. It grew out of Onderdonk and Hutchinson's concern?

A. Yes, sir.

Q. You were partner with Hutchinson?

A. I was.

Q. You have been a licensee of Goodyear a long time?

A. We were.

Q. What sort of goods did you make?

A. Shoes.

Q. You belong to the four associates so called?

A. No, sir.

Q. Did Hutchinson?

A. He did; not when he was with me, however; it was after he went to Newark.

Q. When he was with you you were licensees?

A. No; I dissolved partnership before we became licensees of Goodyear.

Q. What business were you following in 1849?

A. I was in the suspender business; then Mr. Lettson and myself were licensees of Goodyear.

Q. Was it you and Lettson who went to see Day's machine, or you alone?

A. Myself alone.

Q. With whom were you in business then?

A. With Lettson.

Q. When did you go in business with him?

A. I think it was somewhere about 1840.

Q. You say you went to see some rollers between 1847 and 9, and you fixed the date?

A. I think that was the time; I do not recollect distinctly.

Q. That was for spreading or grinding?

A. Spreading.

Q. At that time you were a licensee of Goodyear?

A. No, I think not. I do not recollect when I took out a license; we were

making suspenders before we had a license; we were negotiating for it. I do not recollect distinctly the time we got it.

Q. Don't you know you had it in 1847?

A. I might have had it.

Q. When did you stop making suspenders, or agree to stop under an agreement with Judson?

A. Really, I do not recollect the time.

Q. (By Mr. BRADLEY.) Was it in writing?

A. I do not recollect that it was.

Q. You were a licensee of Goodyear when you did make that agreement to stop?

A. I think I was.

Q. And had been for some time?

A. Yes, sir.

Q. Don't you know you became a licensee either in 1844 or 5?

A. I do not recollect; since I went out of the rubber business I have had no concern with it at all.

Q. You don't mean that you were taken here by surprise?

A. O, no.

Q. You have been here a week?

A. Yes, sir.

Q. You say you don't recollect what time you went into the suspender business—whether within six or five years?

A. It might have been the time you say; I do not recollect.

Q. Can't you now refresh your recollection so as to tell when you left it?

A. I do not recollect the year; we all left it at one time.

Q. What did you go at afterwards?

A. Making shoes?

Q. What did you want this spreading machine for?

A. To spread gum for suspenders and shoes.

Q. Do you know which?

A. We commenced with suspenders and use it now?

Q. Didn't you get these patterns very soon after you changed your business to shoes?

A. I do not recollect; I could refresh my recollection at home so far as dates are concerned.

Q. How can you fix it between 1847 and 9 that you went to New York?

A. Because it was after I went into partnership with Lettson; we wanted heavier machinery.

Q. Then it was after you stopped making suspenders that you got the machinery?

A. No; we got it when we made suspenders.

Q. Then it was before 1847 you were at Mr. Day's?

A. It must have been.

Q. How early did you go into litigation about this business?

A. I do not know.

Q. Do you remember whether there were lawsuits pending in 1846?

A. There might have been; I do not recollect when they were. As soon as I got out of the business I had no further concern with it and it went out of mind.

Q. You have forgotten all about it. Don't you know that in 1846 there was a lawsuit between Goodyear and Day, and that some time after that there was an arrangement made by which you were to stop your suspender business, together with all the rest?

A. There was a lawsuit previous to that, and I think it ended in that. I recollect now that we gave the suspender business exclusively to Goodyear or Day.

Q. Do you recollect you were using a shirring machine, of which Day claimed to be the owner of the patent?

A. We were using a shirring machine, but he never made any claim upon us about it.

Q. Didn't he sue you for using that machine?

A. I believe he did: there were so many suits I paid little attention—it makes very little difference whether we were sued or not.

Q. You remember what he said to you about his being the father of these rollers?

A. Well, I have another recollection of that; he said he was the father of it, and if we would get his machine it should not cost us any thing. When we came to settle he charged us for the use of the patterns.

Q. That you think was in 1849; was it not in 1850?

A. It was previous to 1849.

Q. It might have been as early as 1845?

A. It might have been.

Q. And as late as 1849?

A. Not as late as that.

Q. How many other gentlemen are there interested in your factory besides yourself?

A. Their name is legion; I do not know how many; one man may be owner to-day and another to-morrow.

Q. When did you first become acquainted with Hutchinson?

A. In October, 1835.

Q. When did you go into business with him?

A. It was along in the fall, between October and January.

Q. Did not Mr. Millard remain with Hutchinson alone till the spring of 1836?

A. No, sir.

Q. Were you ever connected with Hutchinson before the spring of 1836?

A. I certainly was.

Q. How do you fix that date?

A. That was the birth of my business in New Brunswick.

Q. When did Hutchinson commence business there?

A. I found him there in October, 1835; he had not been there a great while.

Mr. RICHARDSON here read, from the deposition of Mr. Hutchinson, an answer to a question in relation to the machinery used in 1835, giving a detailed description of it, and asked witness if that answer was true.

A. That was true at first.

Q. True in 1836?

A. In 1835, and perhaps the fore part of 1836.

Q. Do you think that in 1836 you got any other machinery?

A. Yes, sir.

Q. You did not use Millard's machine?

A. We used it up to the time we got other machinery, in 1836.

Q. At what time in 1836 did you commence with the horse-power?

A. We had it in 1836; and in February, 1836, we got a steam-engine, and as early as April we had it in operation.

Q. What machines did you attach it to?

A. We had the Millard machine and another grinding mill from New York, if I recollect right, and then these heavy calenders, that we got from New York, for spreading rubber.

Mr. RICHARDSON read another question and answer from Hutchinson's deposition, as to whether a portion or all of the rubber first used without a solvent was not ground in this same mill, and asked witness if it was correct?

A. I think we never ground any quantity without a solvent in that mill. It was too weak; but we got a mill, I think in New York, that was considerably stronger, that went with steam-power, and with that we ground it. We had not the power previous to that.

Mr. RICHARDSON read another question and answer to the effect, that previous to 1845, a large amount of goods was manufactured, all of which required a solvent, and not on the plan of the machinery patented by Chaffee.

Mr. BRADLEY objected to this mode of interrogation. Objection sustained.

- Q. Did you break your machinery at any time?
 A. Frequently.
 Q. So that you had to stop?
 A. We often broke our machinery.
 Q. Did you break the Millard machine, and throw it away?
 A. I do not know what became of it; we might have broken it.
 Q. Were you interested in the rubber business at the time of the extension of this patent, in 1860?
 A. Nothing more than a shareholder.
 Q. When Onderdonk and Lettson commenced making shoes, did they use turpentine?
 A. They did.
 Q. How long did you continue it?
 A. I do not know; when we first commenced we made prupella and velvet shoes.
 Q. Didn't you make some other kind?
 A. We made beavertine or moleskin.
 Q. Didn't you make shoes with turpentine, and send them to Philadelphia to be sold?
 A. I cannot say.
 Q. Didn't you, in 1846 or '47, get some new machinery for grinding and spreading rubber?
 A. We got these rollers, and I cannot say but we got calenders.
 Q. Didn't you get some calenders at New York?
 A. Yes, sir.
 Q. Prior to getting these rollers in 1847, didn't you make a lot of shoes with solvents?
 A. In the commencement we made shoes with solvents; the exact length of time we continued it I cannot say.
 Q. When did Onderdonk and Lettson commence?
 A. In 1840.
 Q. At first you made prupella and beavertine shoes?
 A. Yes, sir.
 Q. You commenced making overshoes of rubber?
 A. Yes, sir; rubber on the outside instead of the inside.
 Q. You think you continued making these some time before you got this new machinery from New York?
 A. No, sir.
 Q. Were they not made with a solvent?
 A. Some of them might have been.
 Q. Were not all of them?
 A. Yes, sir; before we got any new machinery, of course.

Re-examined by Mr. Brady.

- Q. You have been asked about some litigation and some agreement you made; do you remember that that was a suit by Goodyear against Seaver & Knowlton of Boston?
 A. I remember of hearing of it.
 Q. Do you remember that that was the suit to which Mr. Richardson's question was applied?
 A. I understand it to be so.
 Q. Did Mr. Day ever make any claim to your shirring machine?
 A. No, sir.
 Q. Did he manufacture shirred goods after that time?
 A. He did, as far as I know.
 Q. As a licensee of Goodyear?
 A. Yes, sir, as far as I know.

Re-cross-examined by Mr. Richardson.

- Q. You say you remember that; it was a suit against Seaver & Knowlton?

- A. I remember of hearing it so.
 Q. When did you hear it so? here to-day?
 A. I heard of it at the time; I have heard of all these things.
 Q. Was there not a suit directly against you in New York?
 A. There might have been; I do not recollect.
 Q. Didn't Day sue you for infringing the patent for shirring goods?
 A. I meant to have answered that question when it was put, by saying that we were sued afterwards; I do not recollect the time.
 Q. Were you sued before 1846?
 A. I think very likely; there were some three or four suits, I think, against us. I did not consider them of any importance, and paid no attention to them.

Direct resumed, by Mr. Bradley.

- Q. When did you get the new machine you spoke of?
 A. The first spreading mill we had in operation in the latter part of May, or first of June, 1836.
 Q. How frequently, from that time onward, did you continue to get new machinery?
 A. Constantly; we expended vast amounts for machinery, in making it heavier, or improving it.
 Q. Why did you get it heavier?
 A. So that we could grind the gum hard, and get clear of solvents.
 Q. What is the condition of rubber put through one of these grinding machines and spreading machines, with nothing added to it?
 A. It will not stand the atmosphere; it will decompose.

Re-cross-examined by Mr. Richardson.

- Q. How will it be affected with mere spirits of turpentine, and nothing else, and then exposed?
 A. It will have the same effect.
 Q. Will it not be worse?
 A. It may be; I have never tested between the two. I have always known that rubber spread in that way would not stand the atmosphere.
 Q. How is it about life-preservers? Are they not made of pure rubber?
 A. They are; and so long as made perfectly tight and protected from the atmosphere they will stand.
 Q. Solvents do not benefit life-preservers?
 A. I have never tested it.

Mr. BRADLEY now proposed to put in the deposition of Horace H. Day before the Commissioner of Patents upon the application for the extension of this patent,—a certified copy,—and to prove the signature of the original record by a witness, and also the correctness of the copy.

Objection taken; question argued; evidence ruled out; original deposition must be produced; it is not, strictly speaking, a record; exception taken.

DENNIS O'DONNELL, SWORN AND EXAMINED BY MR.
BRADLEY.

- Q. Were you ever a workman in the Roxbury India Rubber Company?
 A. Yes, sir.
 Q. In what capacity, and at what time?
 A. I worked in 1884 at first; part of the time on clothing and part of the time I had charge of the room.
 Q. Do you recollect seeing the Chaffee machine, as it was called, there at any time?
 A. I have seen and worked on it.
 Q. Had it, at the time you saw it, any apparatus for cooling the cylinders by letting in water?
 A. It had.
 Q. (By the Court.) What time was this that it had the cooling apparatus?
 A. I believe about 1886, when I went to work on it.
 Q. At that time did they dispense with these bars?
 A. I could not tell.
 Q. Do you recollect when, if ever, they dispensed with one of these rollers?
 A. I never saw only three rollers, two large and a small one.
 Q. On the spreading part of the machine?
 A. Yes, sir.

Cross-examined by Mr. Jenckes.

- Q. You say the bars were not used upon the machine?
 A. Yes, sir, I believe they were then.
 Q. They were dispensed with afterwards?
 A. But then the machine could be used without them.
 Q. Was the coloring matter put into the machine?
 A. There was some of it sifted through.
 Q. Was it not sifted through in the same place?
 A. Yes, sir.
 Q. How was it sifted?
 A. I believe it was thrown in on top.
 Q. From the hand or a scoop?
 A. From a scoop. It was not but a short time so, because they had other machines for grinding the gum.
 Q. Made soon after this was made?
 A. Yes, sir, about the same time.
 Q. While Chaffee was there?
 A. Yes, sir.
 Q. Describe how the coloring matter was sifted into the grinders.
 A. They had a box underneath, and lampblack; they used to scoop it up and throw it on top.
 Q. Which roller was the cooling apparatus in?
 A. The two under rollers.
 Q. That was in the spreading machine?
 A. Yes, sir. I do not recollect any on the grinder—what we call the warmer—this two roller machine.
 Q. How long did you work at the Roxbury factory?
 A. From 1884 to 1887.
 Q. How many of these grinders, or warming machines, were made and put in operation during that time?
 A. I believe one or two; I am sure of one.
 Q. Besides the large machine?
 A. Like this. (Small model.)
 Q. Was this original grinding machine operated by power?
 A. By steam power.

Direct resumed by Mr. Bradley.

- Q. Was it before or after August, 1886, that you first saw the machine?
 A. Before, I think.
 Q. You say there was a cooling apparatus in the spreading and not in the grinding machine?
 A. Yes, sir.
 Q. When did you leave there?
 A. In 1887.
 Q. What time in the year?
 A. I believe about the first.
 Q. Can you fix the date of your working on this machine?
 A. I could not say.
 Q. Do you know that before you left they introduced cooling matter into the grinding machine?
 A. No, sir, I think not, because it was not wanted so much.
 Q. Did they use a cooling apparatus in the grinder like this (small model) before you left?
 A. Not that I know of.

(Here the Court took a recess; after which Mr. O'Donnell was re-called and cross-examined by Mr. Richardson.)

- Q. You spoke of a grinding machine that was introduced into the Roxbury factory in 1886, where is that grinder now?
 A. I do not know where it is.
 Q. Do you know where the original Chaffee grinder like this (small model) is?
 A. It is in Roxbury.
 Q. Do you work for the Boston Belting Company?
 A. I do.
 Q. How long have you worked for them?
 A. About ten years and a half.
 Q. Have they got the same machinery they had when you went there from Roxbury?
 A. They have not got it now.
 Q. Till what time had they?
 A. They had it all along till within a few days.
 Q. Did they ever use any cooling process with the grinding part?
 A. No, sir; but for the coater this was always used.
 Q. (By Mr. BRADLEY). What is it used for? Warming?
 A. Warming, simply.
 Q. (By Mr. BRADLEY). It is not used for grinding?
 A. No, sir.
 Q. When did you stop using it for grinding?
 A. About ten or fifteen days ago for warming.
 Q. For grinding?
 A. We warmed in it all the time, but did not grind in it.
 Q. They never ground on the Chaffee machine at all?
 A. No, sir.
 Q. Which did they grind on? Separate machines?
 A. They had small machines like this (model); prepared it for this and warmed it on here.

SPENCER T. PARMELEE, SWORN AND EXAMINED BY
MR. BRADLEY.

Q. Please state your residence and occupation for some years past.

A. My residence now is in New Brunswick, N. J. The principal part of my time, for eight years, has been occupied in manufacturing rubber into shoes.

Q. What was your occupation prior to that?

A. I have worked a great deal in manufacturing establishments as a machinist.

Q. You have seen the specification of the Chaffee patent.

A. I have.

Q. What is the effect of putting rubber through such action as is there described?

A. To operate with heated rollers reduces the strength of the rubber, brings it into a plastic state, and softens it in such a manner that it can be rolled out with cylinders, when mixed with other materials, into sheets, ready for the formation of shoes and other articles.

Q. How does the strength of the rubber compare with the prior process?

A. It is very much reduced.

Q. What is the effect of the preparation when applied to cloth through such a machine as is described by Chaffee? Would the article prepared sell or not?

A. The article would not endure much hardship. When used upon the outside or bottom of a shoe, I should consider it worthless. It might do for carriage-cloth, or some such articles.

Q. What are these samples (referring to samples of rubber)?

A. This is a piece of rubber that I found at Dr. Hartshorn's factory last evening, cut from a sheet perhaps twenty or thirty yards long, prepared apparently for the uppers of shoes. I cut the piece into two parts, and left one in custody of a man they called Baker, who heated the shoes. He said he would bake it or vulcanize it. This morning I took it and cut these strings, so as to show the elasticity after vulcanization.

Objection taken to introducing the subject of vulcanizing; objection overruled.

Q. Go on and explain those samples to the jury.

A. Here is the other piece of rubber that has not been vulcanized. It stretches like other rubber; but when you come to its elasticity, there is very little of it compared with the first piece. This stretches, and stays stretched; the other comes back to its original place in a similar manner to the original, as obtained from Para. Here is another piece of rubber that has never been ground. It is very elastic, tough and solid. The rubber that has been ground and mixed as Dr. Hartshorn prepares it in his factory will not bear pulling; but a piece of the same that has been vulcanized is very hard and solid, and will bear hardship in the shoe or other uses.

Q. What other qualities besides elasticity and strength has this rubber?

A. Durability when exposed to the atmosphere.

Q. Either from heat or cold?

A. Rubber, before being vulcanized, when heated, will become soft, and in the cold hard, the same as the raw material; but the raw rubber does not become as soft as the ground rubber.

Q. State as to the effect upon the rubber put through the machine without any mixture whatever. How long would cloth prepared with rubber prepared in that way last, upon being exposed to the atmosphere?

A. I could not be definite as to the time it would require to decompose, because I do not know. I have spread rubber, when not mixed with other articles, as an experiment for another person—a man by the name of Day. It was called the white rubber—the virgin gam of the most pure kind. I

spread a considerable of a sheet, and after spreading it he gave me a small piece, perhaps a yard square. I carried it to my house, and laid it away to keep as a curiosity. From time to time I have seen it. Some parts of it I discover have become considerably decomposed, but when it commenced to decompose I cannot say.

Q. You have examined the process described in the specification for spreading cloth?

A. I have.

Q. Explain how far it is practicable, and how far not?

A. I have examined the specifications in connection with these models, and should judge them to be in accordance with the specifications and drawings. I notice it speaks of heating the rollers with steam, or otherwise. In the drawing I find no way described, nor in the specifications, of conducting steam into these rollers; and for my own part, were I to take the specifications and drawings to make a machine, I should not know how to apply the steam or heat without borrowing from other machinery, or inventing something new.

Q. Describe how far the process differs in the specification, of applying rubber to the cloth, from what is necessary in practice.

A. The first machine I have used or seen for spreading the rubber on cloth, was composed of three cylinders, one above the other. The two upper ones, I think, were about eighteen inches in diameter; the lower, I believe, about ten, or from eight to twelve; it was less size than the upper ones. There was a screw at the top to operate upon the top box, to drive the upper roller down to the middle one, which was a fixed roller—its boxes were so fixed as not to move either up or down, except when required to adjust the roller upon the runner, or in its proper place, by keys. The lower, or small roller was made to be raised up to the middle roller by levers, operated upon by two excentrics placed upon the shaft, down on one side near the bottom. This machine has none of these fixtures except the two screws driving the first roller against the second, and also the third against the fourth. I do not know but cloth may be spread with this machine, but it would be very inconvenient to work with. We sometimes wish to put a thin, and sometimes a thick coat upon cloth; with the weight of these ponderous cylinders upon the cloth, and with nothing to lighten them up, I should think at times it would be inconvenient to spread cloth with rubber, in the manner we should desire to do it. I think it would be wholly impossible to spread cloth for the uppers of shoes, such as Hartshorn and others wish to make, with this machine, for the reason that all of it would be spread too thin. This ponderous weight of iron must certainly make it thinner than what we use for our work.

Q. Are there any means of regulating that, as described by Chaffee?

A. I do not see there either levers or screws, except the top one pressing the whole down; the bottom roller appears to be fixed.

Q. Just state the changes that have been made between the machines used, and that.

A. There are machines now made for spreading, some with five, some with four, and some with three rollers. I have never seen a machine but what had one fixed roller; the other rollers are made to work to and from it, regulated by screws, or wedges, or both.

Q. In that respect, you say, you cannot in this model regulate the relative position of the cylinders?

A. Yes, sir; I should not know how to work that, without I applied something to it—made another machine in part. I think it would stop our works to take out the machinery that we are using now, and adopt this in its stead.

Q. Now please explain the difference between the grinding part as used and as specified.

A. This (model) is the kind of machinery that I have always used since I first went into business. It is the first I ever saw for grinding rubber. I found it in Mr. Candee's shop when I went there. There were a number of mills

there. He also had mills for grinding camphene rubber; they were made in a similar manner to this. I never saw any thing of that kind (Chaffee model), or that looked like that, till I had seen it from the drawings or model that I saw here. The rollers, in the first place, run the contrary way from this (model). This is so fixed that the rubber works down between, so as to make it handy for rolling the rubber on either side. In grinding, we place the rubber between the rollers, and let it pass through. The man tending the mill stands ready with his hands to roll it off. He don't calculate to let it in with the mass, but lets it all come through, and then throws it in again. We find there is no other way of grinding it, and making it fine. If we make it run round and round, some part of it will stay between, and does not pass through, while other parts go through and become more finely ground than the rest. This mill (Chaffee's) was made to run right the reverse—the rollers to run up, with the rubber put underside. Here is an apron attached to the underside to carry the rubber in below, and have it come up on the top. A man to roll rubber off from that, I think, would find rather an uphand business—pushing his hands against the rubber. They place the rubber upon this apron, and it is fed in and comes up. All the machines I have seen run the reverse. Mr. Candee's machine had pipes in the stuffing-box at the ends of the rollers, for heating them. When I went there, he had no water in any of his mills, not even in his calenders. We were greatly troubled for spreading the rubber, because sometimes it would be too hot. We had some fixtures, but no water. We afterwards applied water, and found it as necessary as steam, and much more so for the grinding mills. They might be run slow enough, perhaps, as not to heat the rollers too much, but it would not be a very expeditious manner of grinding it. There is no stuffing-box to this machine, I believe; I have seen none in the model, drawing, or specification, and no manner described as to what way the steam is got into the rollers, or applied to them—either upon the outside, or in the interior. It merely states that the rollers are hollow.

Q. Any thing in the size of the rollers or the mode in which motion is communicated from one to the other, different from the practical machinery?

A. That is not so material. I have seen mills move both ways; it is not material which runs the fastest.

Q. Is there any thing else in the specification which differs from the machinery used?

A. In the specification this is called one machine. I never saw the original machine, and from the drawings I should think it was one machine. It there speaks of a machine of two parts, one for spreading and the other for grinding, and from reading that specification, I should come to the conclusion that it was all attached together, similar to this model.

Cross-examined by Mr. Jenckes.

Q. Do you know of any practical mode by which these rollers could be heated by applying steam externally?

A. Not while in operation; but while lying still they could be heated by external application.

Q. Do you see any thing in the specifications that would lead you, or any mechanic to suppose that there was any mode of applying heat to the external surface?

A. There is not.

Q. Are you not acquainted, as a machinist, with a variety of modes of introducing steam into cylinders, when in motion?

A. No, sir, not a variety of modes—perhaps I do not understand your meaning.

Q. Are you not acquainted with one mode which is almost universally used of introducing steam into cylinders when in motion?

A. Yes, sir.

Q. How long have you known that mode?

A. The length of time I have been engaged in the rubber business.

- Q. You are acquainted with the steam engine?
- A. I am.
- Q. And the modes of introducing steam into them?
- A. Yes, sir.
- Q. With rotary engines?
- A. Not particularly.
- Q. With oscillating engines?
- A. I have seen them.
- Q. Do you know whether or not that is a mode of introducing steam that has long been well known to machinists?
- A. I suppose it has.
- Q. How long were you a machinist before you went into the rubber business?
- A. I have worked at machinery a good number of years in factories.
- Q. What kind of machinery?
- A. For different purposes.
- Q. What purposes?
- A. In button and screw manufacturing establishments.
- Q. What did you do in such manufacturing establishments?
- A. I sometimes built machinery, sometimes worked it, and sometimes repaired it.
- Q. Was your trade a builder of machinery before you went into the rubber business?
- A. The first trade I learned was blacksmithing; afterwards I went into machine building.
- Q. What kind of machine business did you go into?
- A. For manufacturing iron ware.
- Q. You spoke of some changes in the machinery as to the number of rollers—some having 5, some 4, and some 3?
- A. Yes, sir; there is another machine that has two—not much used by myself.
- Q. Those rollers operate the same way as in this (Chaffee model)?
- A. Similarly.
- Q. Similar to that described in the specifications and drawings?
- A. (No answer audible).
- Q. Is not rubber ground in Dr. Hartshorn's factory?
- A. I saw it in some process which I call grinding.
- Q. You spoke of these pieces being put through a spreading machine.
- A. I took them from a sheet; I did not see it spread.
- Q. Do you know what the rubber was composed of?
- A. I do not. I knew it was an article like rubber, so much so that I could call it rubber. I know, too, that there is coal tar in it, or something similar to it.
- Q. Did you see it compounded?
- A. I did not.
- Q. Do you know whether there is lead in it?
- A. I do not.
- Q. Or lampblack?
- A. I do not.
- Q. Do you know that either of these pieces is pure rubber?
- A. I think they are not.
- Q. Do you know whether or not they had gone through the usual mixing process used in that factory?
- A. I could not say that they had; they have that appearance.
- Q. Both pieces?
- A. Yes, sir.
- Q. You say these grinders require water because they are made to move fast?
- A. They will heat, I believe, to run in almost any motion with rubber—that is, motion fast enough to make any business in grinding.

- Q. Have you ever seen cylinders made larger to move slow?
- A. I have never used cylinders that were over about fourteen inches in diameter for grinding. The surface of this is calculated to run with the same speed as that of smaller ones.
- Q. The more you increase the speed the more necessity for cooling?
- A. The faster the motion of course the greater the friction.
- Q. You spoke of some white, virgin rubber that became decomposed; did you see that when it was prepared?
- A. I did; it was brought to me in its rough state.
- Q. What was mixed with it?
- A. Nothing.
- Q. That was raw rubber?
- A. Clear rubber.
- Q. You spoke of one of those pieces of rubber having been vulcanized; was that done before it went through the machine or after?
- A. I did not say it had ever been through any machine.
- Q. You have no doubt that it had been?
- A. I have no doubt.
- Q. Was that vulcanizing done before or after it went through the machine?
- A. When I took the rubber it was all like this (unvulcanized); one half was left to vulcanize, and the other I took away.
- Q. Was the rubber vulcanized after it had been through the machine or before?
- A. After it was spread in this form.
- Q. Is not that the usual way vulcanizing is done—after it has been through the machine?
- A. Where I have worked we have always vulcanized it after it is manufactured into articles.
- Q. Shoes are vulcanized after they are manufactured?
- A. Yes, sir; that is the last branch of the manufacture, except taking them from the lasts.
- Q. Do they do any thing but heat them in that last stage?
- A. They are put into an oven or heated room and heated.
- Q. That is all, is it?
- A. That is all that is done to them that I know of.
- Q. As a machinist you can arrange these rollers in a different form, gear them differently, and still produce the same result?
- A. Yes, sir.
- Q. No difficulty in changing the form of a machine like that to suit the pleasure of the builders?
- A. Yes, sir, we can change the form so as to produce the same results.

Direct resumed by Mr. Bradley.

- Q. You spoke of coal-tar being put into the rubber; is not that a solvent?
- A. It is a substance that will help to reduce the rubber to a soft state by the action of stirring or grinding.
- Q. You say that it appeared to you there was coal-tar in that rubber?
- A. Yes, sir.
- Q. As an expert, is coal-tar always used in connection with the machinery?
- A. I have always used it, or rosin from pine, since I have been a successful manufacturer of rubber shoes.
- Q. Have you made such shoes as Hartshorn makes?
- A. Shoes that look like them.
- Q. What is the effect of rosin of pine on rubber? the same as coal-tar, or different?
- A. It operates in a similar manner.
- Q. It is used for the same purpose?
- A. It is.

Q. If Dr. Hartshorn should dispense with the vulcanizing process, would the articles he makes be salable?

A. I am not acquainted with the process of shoemaking.

Q. Is there any such article in the trade as rubber shoes not vulcanized?

A. I know of none.

Q. In the history of the business has the vulcanized shoe displaced the old shoe entirely?

A. I think it has.

Q. Prior to the vulcanizing patent there were shoes manufactured without it?

A. I have seen some that were—some of Hartshorn's that were said not to be vulcanized. I do not know what the process was. I never was acquainted particularly with his process of manufacture.

Q. These two pieces of rubber you exhibited were the same, only one has become vulcanized?

A. Yes, sir; they were cut apart.

Q. You brought them to show what was the effect of the vulcanizing process?

A. Yes, sir.

Re-cross-examined by Mr. Jencks.

Q. You say you use coal-tar?

A. Yes, sir, I have used some.

Q. When is coal-tar put into the rubber?

A. Always before spreading into sheets.

Q. How many times is the rubber put through the grinding-machine before coal-tar is put in?

A. We generally run it through until it becomes considerably warm.

Q. Then how much coal-tar do you put in?

A. A small quantity.

Q. How much to a pound of rubber?

A. I do not know exactly the amount I used to use; I have not used it myself for some time; I have used rosin instead.

Q. How much rosin do you use?

A. At this time I believe about twelve ounces to a batch.

Q. How much is a batch?

A. I believe it is as much as ten pounds.

Q. About as much as the coal-tar in weight that you used?

A. I believe I have used more coal-tar.

Q. Do you use more than a pound of coal-tar to a batch?

A. I believe I have.

Q. In ordinary use?

A. In ordinary use.

Q. Did you use two pounds?

A. I do not think I ever did.

Q. In what state was the coal-tar when put into the rubber?

A. As we bought it from the gas manufacturer.

Q. Of what consistency was it?

A. About the consistency of molasses, in the summer; in the winter, thicker.

Q. Heated before it is put in?

A. No, sir.

Q. Did you use any spirits turpentine or camphene?

A. I have not in my operation; while at Mr. Candee's it was used to my knowledge.

Q. That is eight or ten years ago?

A. About eight.

Q. Was it not discontinued by him?

A. Yes, sir.

- Q. Are you acquainted with any other works?
 A. I have worked at other places.
- Q. Were you acquainted with the manufacture of rubber when solvents were used for the purpose of dissolving it in any quantity?
 A. Mr. Candee was making his shoes wholly in that way when I went there; with turpentine or camphene as a solvent or partial solvent.
- Q. He discontinued it and used machinery?
 A. Yes, sir, after he got able to work rubber without.
- Q. Do you know how much solvent was used when you first went there?
 A. I do not.
- Q. What was rosin put into the rubber for?
 A. I put it in for the purpose of making it spread easier and better.
- Q. Rosin?
 A. I can get along with much less time in spreading. It serves to give a drier surface, I think, after heating, and I think it improves the appearance of the work.
- Q. Where did you first learn to put in these materials?
 A. In Mr. Candee's factory.
- Q. How long ago?
 A. I cannot tell exactly; it was soon after we got to manufacturing shoes out of what we call steam-rubber—that is, without the use of turpentine.
- Q. Why did you discontinue the use of camphene?
 A. We could do better without it.
- Q. Could you make a better article?
 A. I would not say that, but it was not so offensive to the workmen—it was pleasanter to work.
- Q. You say you use about twelve ounces of rosin to about ten pounds of rubber; how would the bulk of these articles compare?
 A. Rosin is lighter than rubber, bulk for bulk.

Direct resumed by Mr. Bradley.

- Q. When you gave up the use of camphene at Mr. Candee's, was any thing else used, and if so, for what?
 A. We did not use any thing to take its place immediately. We tried to work the rubber by rollers—in fact we tried this sometime before—but we found it very nearly impossible, without mixing some thing with it. It would spread on to the cloth and look tolerably smooth and fair—the clear rubber with the little mixtures, we wanted for vulcanizing it. We used to spread some times a dozen coats to a sheet of uppers, and then it was so rough that we threw it all away. So we finally introduced other articles into the rubber for the purpose of making it spread smooth. There was a number of articles tried. We introduced more lead; that was expensive, and did not operate well upon the rubber; and we finally introduced whiting or ground chalk. By the use of that we were able to subdue the rubber, so as to spread it into sheets smooth enough for the soles and uppers of the shoe; and without that we never could make a sheet that was perfect enough to make a smooth, handsome shoe.
- Q. What was finally substituted for camphene?
 A. I would not say that there was any thing really used as a substitute for camphene. I do not think that was the full object of any thing that was put in.
- Q. Does not coal-tar have that effect?
 A. The whiting has the effect to reduce the rubber. It mixes with it, mingles, and dissolves the particles of rubber in a manner that it is very difficult to dispense with it, or something as a substitute for it. Rubber is a crabbed article to work. To run it on to the cloth, for the purpose for which I understand this machine to be built, it might be put on in one thin coat; but to make a substance thick enough for soles, we find it impossible even to make an article of a surface sufficiently smooth to manufacture into shoes.
- Q. Without something with it?
 A. Without something with it.

Q. Dr. Hartshorn makes boots and shoes only?

A. I believe that is all I have seen.

Mr. BRADLEY then put into the case the Atkinson Patent, claiming that it covered one principle of the Chaffee patent--the application of rubber to cloth. The model being exhibited.

MR. PETERS RE-CALLED AND EXAMINED BY MR. BRADLEY.

Q. Did you make this model?

A. I did.

Q. You read the specification of that patent, and made the model?

A. Yes, sir.

Cross-examined by Mr. Jencks.

Q. You say you read the description of Atkinson's machine from his specifications?

A. From the book they brought me from the Franklin Institute.

Q. Do you mean to say you have made these cylinders in the proportion indicated by Atkinson?

A. I do not say that.

Q. Have you not made them in very different proportions from what the book states?

A. I think probably I have in different proportions.

Q. Did you do that of your own motion or by direction?

A. I am guilty of that deviation from the fact that I was embarrassed in connection with my other business. I was dilatory, and the book was taken from me, and the last one was made very rapidly.

Q. (Referring witness to the book where it describes two cylinders at one end.) Do these cylinders (in the model) represent correctly the diameter in proportion to the length?

A. They do not.

Q. (Referring him to the description of the carriage cylinder.) This (in the model) should be three times the size, should it not?

A. It should be, and would have been if I had had time to follow the scale.

Q. Is there any description in the specification of any method of introducing steam into the smaller roller?

A. I believe not.

(A stationary metallic box or steam case is described in the specification, which witness said was not represented in the model.)

Direct resumed by Mr. Bradley.

Q. How long would it take to make a model of the other mode?

Mr. JENCKES. We have one making.

Mr. BRADLEY. Very well.

JOHN HASKINS SWORN AND EXAMINED BY MR. BRADY.

- Q. Where do you reside?
 A. In Roxbury.
 Q. Are you engaged in any business now?
 A. I consider myself a manufacturer of India rubber.
 Q. Were you connected with the Roxbury Company?
 A. Yes, sir.
 Q. What year did your connection with them begin?
 A. I think in 1882.
 Q. When did it cease?
 A. When the factory exploded, and the business stopped in 1886 or 1887.
 Q. What was your connection?
 A. I was a stockholder.
 Q. During all that period?
 A. Yes, sir.
 Q. When did you first see the Chaffee machine?
 A. I saw it in 1885, while it was building.
 Q. It was in the building at Roxbury?
 A. Yes, sir.
 Q. What became of it after the failure of that company?
 A. It remained till October, 1843, when I purchased it at auction.
 Q. For how much?
 A. \$525.
 Q. It was sold on the premises?
 A. Yes, sir; to be removed within ten days. They had let the building, and were obliged to have it cleared.
 Q. Had it remained all the time from 1887 till 1843?
 A. Yes, sir.
 Q. Used at all by any body?
 A. It was used in 1836 and '37, and, I think, some in 1838 and '39.
 Q. After they failed. In 1838 and '39, who used it?
 A. Mr. Goodyear used it, and Mr. Armstrong occasionally.
 Q. Mr. Goodyear was making experiments, was he?
 A. Yes, sir, by Armstrong's leave.
 Q. Whose auction sale was that at which you bought the monster machine?
 A. It was sold by David A. Simmons and Mr. Fisher; they owned the building and let it.
 Q. Was it a sale by the company or by trustees, or by whom?
 A. They had divided the property, and Simmons and Fisher had taken this part of it—the building, and they owned the machine.
 Q. What did you do with the machine?
 A. I put it in the building now owned by the Boston Belting Company.
 Q. Did you purchase any other property at that sale?
 A. I bought four patent-rights at the same time.
 Q. One of them this Chaffee right?
 A. The Chaffee patent.
 Q. For how much?
 A. Six dollars.
 Q. Did you take the title to that patent, or what did you do?
 A. Mr. Goodyear wanted me to transfer it to the Naugatuck India Rubber Company, and said that they would settle with me for it; which they did afterwards.
 Q. The title to it passed to Goodyear?
 A. Yes, sir.
 Q. Was there any India rubber factory in this country from 1887 to 1843, that you knew of?

A. I did not know of any except Hayward at Woburn, and I was manufacturing a little at that time myself—that is all I knew of that I recollect now.

Q. Were the goods which were made at the Roxbury factory with the Chaffee machine merchantable and profitable, or not?

A. I believe some that Armstrong made were pretty good for lampblack goods.

Q. Did you subsequently become acquainted with what Goodyear claimed to be his invention—the vulcanizing process?

A. Yes, sir.

Q. Before the date of that patent, June 15, 1844, were any goods made any where, by anybody, that could resist the action of heat and cold, or either?

A. I know of none.

Q. What was the cause of the failure of the Roxbury Co?—the great primary cause?

A. The great cause was using bad turpentine.

Q. What other?

A. The goods came back in a damaged state from all parts, in great quantities—warm climates particularly.

Q. The goods made at that time, when exposed to heat, would stick together, and to cold, would stiffen?

A. Yes, sir.

Q. Is that the seal of the Company impressed on this paper [B]?

A. I believe it is.

Cross-examined by Mr. Richardson.

Q. You have been several times a witness on the side of the Goodyear licensors, have you not?

A. Yes, sir.

Q. In the suits that have been tried, have you not?

A. I was witness in the great case at Trenton.

Q. Were you a witness on the extension?

A. Yes, sir.

Q. Look at this certified copy of a deposition, and see if you remember it. (Witness looks over it.)

(Objected to; original must be produced.)

The COURT. We have been through this point in the case of a similar copy.

Mr. RICHARDSON. Not where the witness himself was on the stand. The gentlemen have a perfect right to read a deposition to the deponent himself if he is on the stand.

Witness. I have no question of that being my deposition. I believe it is all right.

Mr. RICHARDSON read the deposition of witness, in which he stated that all the goods manufactured at Roxbury were valuable, and gave entire satisfaction.

Q. Now look at this deposition in the Goodyear & Day case. (Witness looks over it.)

A. That is correct.

Mr. RICHARDSON read it, in which the witness stated that Goodyear and others received with astonishment the announcement by Chaffee, of the improvement he intended to effect.

Direct resumed by Mr. Brady.

Q. Did you appear as a witness upon the extension, in behalf of those who wanted to obtain it?

A. Yes, sir.

Q. Who were the parties to that proceeding who were seeking the extension?

(Objected to; objection overruled.)

A. Wm. Judson called upon me a week or more prior to Aug. 30, 1850, and asked me to assist him in examining the papers at Mr. Simmons' office—the old Roxbury papers, with reference to the extension of the patent.

Q. Do you know, as a matter of fact, for whom Mr. Judson was acting and laboring to procure the extension?

(Objected to; ruled inadmissible to prove the fact, when it can be proved by better evidence; exception taken.)

Q. Were you at that time one of the licensees of Goodyear?

A. I was.

Q. Who were the others?

A. Mr. Candee & Co., the Hayward Co., Ford & Co., and I think other Companies in New Jersey, the Goodyear Co., and Mr. Cutler, of Springfield.

Mr. GRADY then put in a paper dated July 1, 1848, being an agreement among the associates, so called, to provide a fund out of the tariffs, for the purpose of maintaining the patents of Goodyear (marked M.)

Adjourned.

SEVENTH DAY.

PROVIDENCE, *Wednesday, Jan. 31, 1855.*

TESTIMONY OF HASKINS AND JARVIS.

Upon the assembling of the court, it was proposed that the court and jury should visit Dr. Hartshorn's factory, to inspect his machinery. Accordingly, the twelve jurors, the court, the counsel, and reporters proceeded to the factory. By arrangement between counsel and court, it was agreed that Mr. Day, Mr. Hartshorn, and Mr. Stoddard should be admitted into the factory with the rest. About two hours were spent in inspecting the works. The Court having reassembled,

Mr. BRADY offered in evidence a contract between Ohas. Goodyear and the shoe associates, dated July 1, 1848, granting to them the exclusive right to make India rubber boots and shoes.

Also, an agreement between Leverett, Candee, and the Hayward India Rubber Company, the Newark India Rubber Company, Ford & Co. associates, and Isaac Hartshorn and Daniel Hayward (dated Feb. 1, 1851), granting a full and absolute license to manufacture and vend any amount of boots and shoes.

MR. HASKINS RE-CALLED AND EXAMINED BY MR.
BRADY.

Q. Do you know, as matter of fact, who procured the extension, and for whose benefit?

(Objected to; objection overruled.)

A. I understood Mr. Judson—

Q. I do not ask what Judson said.

A. I can state my supposition.

Q. (By the Court.) Your supposition is for what Mr. Judson told you, is it not?

A. Yes, sir.

Q. You were examined as a witness on that extension?

A. Yes, sir.

Q. Who procured you to attend in favor of that extension?

A. Mr. Judson.

Q. Were there any other witnesses examined in your presence?

A. Yes, sir; Geo. Woodman, and other witnesses that I do not remember at this moment, in favor of the extension.

Q. Did you know who were the opponents of the extension?

A. I knew that Mr. Day was.

Q. Did you know of any other person?

A. I do not remember any other person.

Cross-examined by Mr. Richardson.

Q. Was Mr. Day present at this examination?

A. I think not.

Q. Did you ever see him present at the examination of witnesses?

A. I did, in Boston.

Q. Any where else?

A. No, sir.

Q. Did you see him do any thing about it?

A. No, sir.

Q. Did you see him at all from the time of the examination, in relation to the extension, till after it was extended?

A. I think I did not.

Q. Did he write to you?

A. No, sir.

Q. Then why do you say you knew he opposed it?

A. I know it as well as I know any thing that I did not actually see.

Q. Had you any knowledge upon that subject except hearsay?

A. There were counsel that were employed by Day, I understood.

Q. You do not know?

A. No, sir; only what they said.

Mr. BRADY then put in the testimony of JAMES A. DOHR, taken in New York, which was read, together with the cross-interrogatories. Rulings were made upon the several objections.

Also, the testimony of HIRAM HUTCHINSON, which was in like manner read, and rulings were made upon the objections.

Mr. BRADY next put in an agreement between Charles Goodyear, and Seth P. Staples, and Wm. Judson, dated July 1, 1848, to show that Messrs. Staples and Judson were employed as attorneys and counsellors of the licensees, and that a fund of 15 per cent. was created.

(Objected to; objection overruled.)

Also, an assignment of Charles Goodyear to Judson, dated Aug. 14, 1846, of one eighth part of all right, title and interest, to all inventions and patent rights belonging to Goodyear.

Also, a paper executed to Mr. Judson, connected with the agreement of the 1st of July, 1848, of the shoe associates among themselves.

Also, a transfer from Goodyear to Judson, dated Nov. 28, 1848.

Also, a transfer from Goodyear to Judson, dated May 20, 1850, of one eighth interest in all Europe.

Also, a memorandum of an agreement between Goodyear and Judson, dated July 1, 1848.

Also, an agreement between Chaffee and the Roxbury Co., dated March 28, 1835, together with the papers indorsed on it, dated Feb. 15, 1837.

Also, a conveyance from the Roxbury Co., to Messrs. Andrews and Savage, dated May 24, 1837, of the letters patent, signed by the President, Mr. Savage, in the presence of Messrs. Sargent and Simmons.

Objected to: it is necessary to produce the records of the corporation to show that the deed was authorized.

(Objection overruled; exception taken.)

Mr. BRADY next offered a conveyance of the Chaffee patent by Andrews and Savage to Messrs. Loring and Simmons, as trustees, dated March 15, 1841.

Also, a conveyance of the same from Loring and Simmons, trustees, to Warren Fisher and Geo. A. Simmons, dated Sept. 15, 1841.

Also, a conveyance of the same from Fisher and Simmons to Charles Goodyear, dated July 28, 1844.

**BENJAMIN H. JARVIS SWORN AND EXAMINED BY MR.
BRADY.**

Q. You are a clerk of the New York common pleas?

A. Yes, sir.

Q. Were you at one time in the employment of Judson?

A. Yes, sir.

Q. At what time?

A. I commenced in February 1851, and remained till May, 1854.

Q. Are you the subscribing witness to that paper (handing him a paper)?

A. I am.

Q. Did you see Chaffee and Judson execute it?

A. I did.

Q. And subscribed your name as a witness?

A. I did.

Mr. BRADY. The paper I now offered is dated Nov. 12, 1851, being an agreement between Chaffee and Judson.

Mr. BRADY then offered to put in the paper of the 5th of September, 1850, between Chaffee and Judson, which he proposed to read on the strength of the recitals in the paper of Nov. 12, 1851.

Objected to.

Adjourned.

EIGHTH DAY.

TESTIMONY OF ARMSTRONG AND SHERMAN.

PROVIDENCE, *Thursday, Feb. 1, 1855.*

Question discussed at length on the admissibility of the paper of Sept. 5th, 1850, without calling the subscribing witness.

The Court ruled that the witness must be produced. Exception taken.

SAMUEL T. ARMSTRONG, SWORN AND EXAMINED BY
MR. BRADY.

Q. Were you at any time connected with the Roxbury company?

A. I was.

Q. At what time?

A. From 1836 to 1841.

Q. When did you last see the company's books and records?

A. I last saw them packed into cases and delivered to David A. Simmons at his office in Boston.

Q. Have you ever seen them since?

A. I never have.

Q. Do you know any thing about them now?

A. I do not.

Q. Did you know Geo. Bradbury, the clerk, at one time?

A. I did.

Mr. BRADY. I called Mr. Armstrong to prove the loss of books.

Mr. RICHARDSON. You offered to produce the act of incorporation.

A difficulty suggested in regard to producing the book without summoning the Secretary of State.

Mr. JENCKES, having power as a member of the legislature, sent an order to procure it. In the mean time

Mr. BRADY offered in evidence the minutes of certain proceedings of the stockholders on the 25th of Jan., 1837, but it was suggested that the plaintiff should cross-examine the witness before the paper was read.

Cross-examined by Mr. Richardson.

Q. Was the record book sent in the trunks to Mr. Simmons?

A. It was.

Q. It was locked up in one of these trunks?

A. Yes, sir.

Q. Where did it come from when put into the trunks?

A. From the office of the secretary.

Q. Who was the secretary at the time?

A. Mr. Bradbury, I think.

Q. Did Gen. Tyler have possession of those books? He was with you when they were delivered?

A. He was not with me, but he was knowing to the delivery. It was by the permission of Mr. Simmons that he put them in his office.

Q. State the circumstances under which he came to have the custody of the record book?

A. The Roxbury company had sold out their effects at auction, or the majority of their property, and there was a balance left of odds and ends, and among the rest the books, franchise, patent-rights, and book accounts. They were put up at auction and sold with the residue of the property.

- Q. Who were they sold to?
- A. The books, papers, patent-rights, and all the residue of the property were bid off by David A. Simmons for account of himself, Gen. Tyler, and myself, consequently I got possession of all the books and papers.
- Q. Did you have the original patents?
- A. I did.
- Q. Were they put into the trunks?
- A. They were.
- Q. The original Chaffee patent among them?
- A. It was.
- Q. Was there a meeting of stockholders in reference to this sale?
- A. There was, and a sale was ordered by the directors and a vote of the stockholders.
- Q. Were you present?
- A. I was.
- Q. You say Mr. Simmons bought the books and papers; did that include all the property of the corporation?
- A. No, it did not; it included the residue that was unsold at a prior sale.
- Q. Was there public notice of that sale?
- A. There was.
- Q. Was notice in the papers required by the by-laws of the corporation?
- A. It was.
- Q. Do you know whether the by-laws in relation to the mode of disposing of the property were complied with?
- A. I presume they were.
- Q. You saw a notice in the papers?
- A. Yes, they were put in by myself.
- Q. Was not one of these by-laws that no property should be sold without a vote of the corporation?
- A. I do not recollect what they were, it is so long since.
- Q. Was there some real estate sold at the same time?
- A. There was.
- Q. Was that bid off by you, Tyler, and Simmons?
- A. A portion of it, one lot I think, was bid off by Baldwin.
- Q. What arrangement was made between you, Tyler, and Simmons at the time these papers were put in the trunks and put in Mr. Simmons' possession?
- A. They were considered as our property, to be held as such, and not to be delivered to any person, or pass out of his hands without the consent of all parties.
- Q. Has there been any request to you to let them pass out of Mr. Simmons' hands since?
- A. There has.
- Q. State the circumstances under which it was made.
- A. I wrote to Mr. Simmons to get a shoe patent, to be used, I think, in this Court in the case of Bourn and Brown, and he wrote me back that he would not, and could not let me have it without the consent of General Tyler. He got that consent afterwards, and sent it to me.
- Q. Did you or he apply to General Tyler?
- A. Mr. Simmons.
- Q. Were these trunks looked when you left there?
- A. They were.
- Q. Who had the keys?
- A. They were left with Mr. Simmons to be handed to General Tyler. General Tyler was to keep the keys.
- Q. Do you know which did keep them?
- A. I think they were left with Mr. Simmons.
- Q. They were in fact retained by him?
- A. By Mr. Simmons.
- Q. Did you pay the purchase-money on that sale?
- A. We did.

Q. Was a receipt given by Simmons to you and General Tyler for the contents of the trunks?

A. There was.

Q. Have you got it now?

A. I may have it amongst my papers. I presume I have.

Q. Where are your papers?

A. In New York.

Q. Did you ever know of an application by Mr. Judson to look at these papers?

A. He applied to me to look at them.

Q. Under what circumstances?

A. He wished to see some of the books of the company.

Q. Did you give your consent?

A. I did.

Q. What took place?

A. I referred him to Mr. Simmons and Mr. Tyler.

Q. Can you fix the date of that application?

A. I can.

Q. What time, in reference to the sale, did the Roxbury company finally break up?

A. The first sale took place in December, 1840, and the last on the 15th of January, 1841.

Q. Did they keep a place of business after that, and keep a clerk?

A. They did. I wound up the business.

Q. Have you ever known a meeting of that corporation for any purpose since the meeting in which this sale by auction was authorized?

A. We had one meeting, Tyler, Simmons, and myself, in order to keep alive the franchise.

Q. What did you do?

A. We made choice of a president and secretary.

Q. Whom did you choose as president?

A. I was.

Q. Who secretary?

A. I was secretary.

Q. Have you known of any meeting since then?

A. I have not.

Q. Here is a deed that purports to be a sale by Mr. Savage. He was the president of the corporation?

A. He was.

Q. Look at that deed.

A. (Looking at it.) It purports to be a deed of sale from the Roxbury company to Ebenezer T. Andrews and others, trustees for the new company—the new associates.

Q. Who were the new associates?

A. That new association was formed mostly of the original stockholders in the Roxbury company, who agreed to purchase the effects of the company, patents, &c., for which they were to pay \$100,000.

Q. Did these new associates make the purchase?

A. They did.

Q. Look at that paper which Mr. Brady has offered, and say whether it is a vote of the corporation authorizing that conveyance to the new associates?

A. I should think it was.

Mr. RICHARDSON read the paper dated January 20, '37.

Q. Were you one of these associates?

A. I was.

Q. Were the associates acting under the charter? Did they become possessed of the stock and keep along the corporation?

A. They became possessed of every thing.

Q. Stock and all?

A. Stock and all.

- Q. And went right on and acted under the charter?
- A. They did.
- Q. Were their votes recorded in the same books, and their proceedings?
- A. I think there was a new book.
- Q. Was that new book in that trunk?
- A. It was, together with all the papers of the corporation of the new associates.
- Q. The new associates were a corporation?
- A. They were a stockholders' corporation.
- Q. And this was a conveyance to these new associates—this deed?
- A. It was.
- Q. Now, when you say there was an auction sale by the corporation, you mean these new associates?
- A. Yes, sir.
- Q. Were they reorganized under an incorporation?
- A. I am not sure whether we had a new, or acted under the old charter. It strikes me we acted under the old charter.
- Q. Have you, Tyler & Simmons, ever sold any of your interest in that purchase, or conveyed it to any body?
- A. We never have.
- Q. Did you always remain the owner of one third of the patent, during its original term?
- A. I so considered myself; I always claimed to be the owner,—each of us owning one third.
- Q. A deed has been read in this case, dated March 15, 1841, signed by Andrews & Savage, trustees of the associates; was there ever a vote of the corporation to authorize that conveyance?
- A. There never was.
- Q. Was it made without authority by these parties?
- A. It was.
- Q. (By the Court.) You say that you three claimed to own the whole of this patent?
- A. We three claimed the whole; we bought the whole.
- Q. Was there ever any authority or vote of the corporation—after the vote of the new associates to sell by auction, at which you bought,—to sell any of that property?
- A. There never was.

Direct resumed by Mr. Brady.

- Q. Were you present at this meeting, the vote of which has been produced to you, of the 25th of January, 1837, of the directors of the Roxbury India Rubber Company?
- A. I was not present then.
- Q. The gentlemen named in the paper, part of which Mr. Richardson presented, were directors of that company at that time?
- A. They were.
- Mr. BRADY here read a printed circular attached to the aforesaid paper.
- Q. Do you say that any thing which is contained in this paper conflicted in any way with any by-law of which you have a recollection?
- A. Not to my recollection.
- Q. That was January 25, 1837; at that time the business of the company had wholly ceased?
- A. It had not.
- Q. When did it cease?
- A. About the time the property was sold, in December, 1840.
- Q. Did they carry on any manufacture from 1837 to 1840?
- A. They did; at least up to the time they sold out, or within a month or two of it?
- Q. Was Chaffee there during that time?
- A. Not all the time.

- Q. During any part of it, from 1837 to 1840?
- A. He was there a portion of the time; I do not recollect what time he left.
- Q. Where did that sale take place in December, 1840?
- A. The first sale took place at the company's factory.
- Q. Who was the auctioneer?
- A. I do not recollect; I think Seaver was one of the firm.
- Q. Was there a person present at that sale who kept a book and put down the names of the purchasers?
- A. There was.
- Q. Was there a catalogue printed?
- A. There was.
- Q. Who bid off the patents at that sale of December, 1840?
- A. The patents were not sold at that sale.
- Q. Here is a conveyance, made by Savage & Andrews, May 24, 1837; when did you first know that such a conveyance as that had been made?
- A. I knew it at the time.
- Q. Who directed this sale, to your knowledge?
- A. I think it was done by a vote of the trustees, after calling together the associates.
- Q. Will you explain to me how there could be any sale after the 26th of May, 1837, of this patent, if it was conveyed at that date to Andrews and Savage as a matter of fact?
- A. They were trustees of the new association.
- Q. Were there any written articles of that new association?
- A. I think there were.
- Q. Who drew them?
- A. I think they were drawn by David A. Simmons; he was their attorney.
- Q. What became of them?
- A. All the books of every kind were in these chests.
- Q. Do you remember who signed these articles of association?
- A. I do not. I have the names somewhere.
- Q. Was Mr. Savage one of them?
- A. He was.
- Q. John S. Tyler?
- A. He was.
- Q. John J. Loring?
- A. I am not sure.
- Q. Daniel D. Brodhead, B. F. Simmons and D. A. Simmons, and yourself?
- A. Yes, sir; and many others.
- Q. Well, then, Andrews and Savage, as trustees of this new association, held the title to this patent under this conveyance in December, 1840?
- A. Yes, sir.
- Q. Had they any thing to do with that sale of December, 1840?
- A. They gave the title deeds to the real estate.
- Q. Had they any thing to do with any sale in December, 1840, or January, 1841, of this Chaffee patent?
- A. All they had to do with it was to sign the deeds of the real estate. All the personal property I received, and bid off myself.
- Q. Here is a conveyance to Andrews and Savage, as trustees of the new associates, dated May 24, 1837, transferring to them this patent; now did they ever, to your knowledge, authorize the sale of it to any body?
- A. They authorized the sale of all the property and effects of the company.
- Q. To whom did they authorize a sale of that patent?
- A. They authorized the sale of it by auction.
- Q. Were you present when they gave the authority?
- A. I was.
- Q. To whom did they give authority?
- A. They gave it in the Board of Directors, at a meeting of the Directors.
- Q. A vote that Andrews and Savage should sell it?

- A. A vote that the property should be sold.
 Q. Was it not that they should sell it, they being the trustees?
 A. I do not recollect the wording of that vote at this time.
 Q. Well, Simmons bought the patent for you, Tyler and himself; were Andrews and Savage aware of that fact?
 A. They were.
 Q. To whom did you pay any thing on that purchase?
 A. I was the treasurer of the associates, and received all the money and paid it out.
 Q. To whom did you, Simmons and Tyler, pay any thing?
 A. We paid it into the treasury of the association.
 Q. Did you apply to Andrews and Savage to convey to you any execution of that title?
 A. We did not.
 Q. When did you first know that Andrews and Savage on the 15th of March, 1841, conveyed this patent to Loring & Simmons?
 A. We heard of it some time after it was sold by Simmons to Goodyear.
 Q. When did you first see this conveyance of 15th of March, 1841?
 A. I believe I never saw it till this day.
 Q. Did you ever before this day see the conveyance by Loring and Simmons to Warren Fisher and George A. Simmons?
 A. I do not think I ever did.
 Q. Or by them to Goodyear?
 A. I do not think I ever did; I heard of it, but never saw the document.
 Q. Now you say that when that purchase was made, in January, 1841, you, Tyler and Simmons, agreed that no title or interest acquired at that sale should be parted with without the consent of all three?
 A. That was the understanding.
 Q. Was that put in writing?
 A. It was not.
 Q. Did you ever communicate that fact to Andrews and Savage, or either of them?
 A. I do not know that I ever did.
 Q. You were witness on the extension proceeding?
 A. I was.
 Q. Did you claim a title?
 A. I did.
 Q. You claimed the same title before the Commissioner of Patents that you claim now?
 A. Yes, sir.
 Q. Were you witness for or against that extension?
 A. I was one of the opposers of it.

Re-examined by Mr. Richardson.

- Q. You said when you heard of this deed made by Andrews and Savage you did something, what was it you did?
 A. I wrote immediately to John S. Tyler and Mr. Simmons, and I also called on Mr. Simmons.

Mr. Brady then read the depositions of JOHN GREACEN, JR., WM. P. BUCKMASTER, HENRY E. CLARK, NATHANIEL JARVIS, JR., and CHARLES G. S. THOMPSON.

Mr. BRADY, in connection with the depositions of Greacen, Buckmaster and Thompson, offered the cash book and receipt book referred to in the depositions, but the books were ruled out for not having been annexed to the commission nor authenticated in the return.

FREDERICK R. SHERMAN SWORN AND EXAMINED BY MR.
BRADY.

Q. State your residence and occupation.

A. I am an attorney and counsellor at law in the city of New York.

Q. How long have you been attorney and counsellor at law?

A. Twelve or thirteen years.

Q. Do you know Mr. Judson?

A. Yes, sir, very well.

Q. When did your acquaintance with him begin?

A. I knew of him and about him at New Haven, when he was at the law school there, and also when he was at college in the city of New York. I knew him before he engaged in this India rubber business as an attorney and counsellor at law.

Q. Up to what time?

A. I knew him prior to 1845 as an attorney and counsellor at law and practising as such, having an office as such.

Q. Did you know of the application for the extension of the Chaffee patent at the time it was pending?

A. I did.

Q. In what way did you get knowledge of the fact?

A. I knew a great deal about this India rubber business prior to that time, and I was employed as commissioner of deeds to take the testimony of some witnesses in the extension—Chaffee, his father, Hutchinson, and some others.

Q. Where was your office at that time?

A. At No. 12 Wall street, in the same building with Mr. Staples.

Q. Can you tell the date at which you were engaged in taking testimony in reference to this extension?

A. In August, 1850.

Q. Chaffee, his father, and Hutchinson, you think, were examined before you?

A. Yes, sir.

Q. Who conducted the examination of witnesses in favor of the extension?

A. Seth P. Staples.

Q. Did Mr. Judson appear before you at any time in these examinations?

A. He did not on the taking of the testimony of Chaffee, nor of Hutchinson, but some week or two previous he may have appeared and put questions to the witnesses. Seth P. Staples did the main conducting of the examinations before me.

Q. Who appeared on the other side?

A. Mr. Day and George Gifford of New York.

Q. Who employed you in the matter?

A. I was spoken to upon the subject by both Staples and Judson, before any testimony was taken. I saw them very frequently at that time. I suppose I may be considered as having been employed by both of them. Being in the same building with Mr. Staples, I suppose as a matter of convenience he requested me to attend to it some time beforehand.

Q. Who paid you for your services as commissioner?

A. I believe I was paid in John Greenam, jr's office, either by him or his clerk, under Judson's direction or order.

Q. Did you make out any bill?

A. I do not think I did.

Q. Here is a paper creating this 15 per cent fund; whose hand-writing is it?

A. That is my hand-writing. (Paper dated July 1, 1848, setting apart a fund, and creating Staples and Judson trustees.)

Q. Mr. Staples is your uncle is he?

A. He is.

Q. In what way did you obtain some knowledge about these India rubber litigations?

A. In 1848, at the time that paper was drawn up. Mr. Staples employed me to assist him in his business in preparing briefs of law; his eye-sight being poor I would go to his house and he employed from 7 to 12 o'clock at night, in all his business, India rubber and all, and from that circumstance I came to know a great deal about these suits, patents, bargains; so that I knew perhaps as much about the business as Mr. Staples, or meet any one at that time. I acquired it in that confidential relation which subsisted between him and me.

Q. You knew these licensees personally?

A. Yes, sir; many of them.

Q. Did you know Chaffee, also?

A. I did at the time his deposition was taken before me, and probably had seen him before then a few times.

Q. What was the first knowledge you had of the extension being applied for?

A. I knew it was in contemplation to have this patent extended in the latter part of 1849, or in 1850. I knew that the conclusion which was arrived at after a great deal of doubt—

Mr. RICHARDSON. Stop.

Q. Was there a conference or consultation amongst any persons, and if so, who, as to obtaining the extension?

A. I have heard the matter spoken of occasionally in Staples' office, and by Judson, as to the propriety of procuring it.

Objected to as hearsay; objection overruled.

Q. Fix as accurately as you can the date in 1849, when this matter was a subject of conference.

A. The testimony was taken in August, 1850, and the subject was spoken of some months previous—four, five, or six months.

Q. Who were the persons who conferred together about it in Staples' office?

A. Hutchinson, Staples, and Judson, at different times. Judson spoke of it in my presence a great many times. Hutchinson and Judson spoke about it in Judson's office many times—as to whether it was worth while to extend it.

Q. That was the question?

A. That was the subject matter of conversation two, three, or four times a week, and perhaps oftener.

Q. Did you ever see Chaffee there in reference to that matter till he came as a witness?

A. No, sir; I do not think I did.

Q. Or his father?

A. No, sir; I do not recollect that he was present. All my own business was separate from Staples'.

Q. Have you seen the original application at the patent office for this extension?

A. I have. I went to examine the papers, and saw it.

Q. In whose hand-writing is it?

A. In the hand-writing of Judson.

Q. All except the signature?

A. Yes, sir.

Q. The signature is—

A. Chaffee's.

Mr. BRADY here read a certified copy of the application by Chaffee for the extension, dated May 22, 1850.

Adjourned.

NINTH DAY.

TESTIMONY OF SHERMAN, JARVIS, BURCHARD, HARRIS,
SWEET, BLAKE, AND BISHOP.

PROVIDENCE, Friday, Feb. 2, 1855.

MR. SHERMAN CONTINUED, BY MR. BRADY.

Q. You have already stated about the part that Mr. Staples and Judson took in the examination of the witnesses before you; for whom did they appear in that extension proceeding?

A. For Mr. Goodyear and his licensees.

Cross-examined by Mr. Richardson.

Q. When were you first retained by Goodyear as his counsel?

A. I think it was subsequent to 1849; but as early as 1846, when the settlement was made with Mr. Day, I was cognizant of and knew a great deal about the India rubber business. I probably saw most, if not all, the important contracts made about it from 1846, though not then retained. I believe, in all the litigations subsequent to 1849, in the Southern district of New York, I was attorney and solicitor of record. That I wish to be understood as being retained in this litigation.

Q. Are you the attorney for Goodyear now?

A. I do not know that I am. I have acted on behalf of Goodyear in the suit in New Jersey recently, in taking testimony.

Q. Have you acted as attorney in taking testimony in this suit here?

A. I went on to Washington, and examined the records of the patent office; nothing further than that.

Q. Did you appear in this case in New Jersey, before a Master in Chancery, between Day and Goodyear, during the last year, as counsel?

A. I did.

Q. Were you employed by Judson?

A. Yes, sir.

Q. Seth P. Staples is your uncle?

A. He is.

Q. He is practising law in New York?

A. He is.

Q. Do you keep your office now where you did with Staples?

A. No, sir.

Q. When did you move away from No. 12 Wall street?

A. Three or four years ago; the building was torn down, and I moved to No. 74.

Q. Your uncle moved to Broadway at the same time?

A. Yes, sir.

Q. From 1849 to 1852, during the litigation in New Jersey, did you have any thing to do with it as counsel?

A. I did.

Q. Were you retained as counsel in the New Jersey suit?

A. I was employed specially to examine witnesses in that case.

Q. Both in law and in equity?

A. I presume so.

Q. You were employed to examine witnesses in relation to the Chaffee patent in that suit?

A. It came up incidentally.

Q. Incidentally?

A. I did not suppose it was among the issues.

Q. You did not know it was?

A. I did not understand it was; it certainly was not an important point in those cases. The issues raised in those cases had little to do, so far as I know, with the Chaffee patent.

Q. You did not know that there was a suit in reference to the Chaffee patent?

A. I think I have heard some intimation since I came into court that there was.

Q. You did not know it at the time?

A. I do not think I did.

Q. Didn't you examine a large number of papers to prove something in relation to the Chaffee patent?

A. Not a large number; there were some witnesses examined, and I think it quite likely that the examination upon this machinery of this Chaffee patent occupied one or two days.

Q. Did you examine Harlow?

A. I think I did.

Q. Was not Dr. Howe examined at the same time?

A. I do not think I examined him.

Q. At what date did you cease any professional connection with that suit in New Jersey?

A. I was employed to take testimony, and when the cause came on in New Jersey, I went over and heard the argument. Then I had nothing further to do with that matter until testimony was taken on account in New Jersey.

Q. You were re-employed last spring?

A. Yea, sir; it could hardly be considered a re-employment; they knew I was acquainted with the business, and requested me to attend—

Q. I only want to fix the fact that you were employed as counsel, and took charge of that litigation?

A. I was employed more especially to take this account.

Q. You had the sole control of it?

A. I would not say that; I went over, and while there I had the management of it.

Q. Did any other counsel go with you?

A. No, sir; there was no other counsel at the time.

Direct resumed by Mr. Brady.

Q. These suits at law and in equity, were between Goodyear and Day?

A. Yea, sir.

Q. Was the Chaffee patent in any way directly or indirectly connected with the equity suit?

A. It was not.

Q. Was the lawsuit ever brought to trial?

A. Not that I am aware of. The testimony was taken in the equity suit, and I do not know now that I took any in the lawsuit.

Q. Were you employed in the examination of witnesses in relation to the Chaffee patent?

A. That was brought in incidentally.

Q. But you did not consider it one of the questions to which your attention was addressed?

A. No, sir.

Q. Do you remember when the case in Trenton was argued?

A. I think some time in 1852.

Q. Did you see Chaffee there during the argument?

A. He was there at that time.

Q. Were the licensees of Goodyear there also?

A. They were.

MR. JARVIS RECALLED AND EXAMINED BY MR. BRADY.

Mr. JARVIS was called to prove the handwriting of Abram B. Thompson, George J. S. Thompson, and Wm. P. Buckmaster, (whose depositions were read yesterday) in the books accompanying the depositions. He swore to the handwriting and to the books. He said he first saw the cash book in Greacen's store in February, 1851; that he remained in that store till 1853; that the book was kept there; that the receipt book was kept in Judson's own office in the same store, or in a desk adjoining his office; that the cash book was produced on the trial in New York, in June last, and the entries read in evidence; and that the handwriting, from pages 13 to 62 inclusive, was A. B. Thompson's.

Mr. BRADY now offered in evidence certain entries in the aforesaid book, in connection with the depositions.

Objected to; objection overruled; entries admitted to show the account the owners of the trust fund have kept; and the manner it was disbursed.

Mr. BRADY then read a number of entries, dated June, July, August, and September, 1850.

Mr. BRADY next offered in evidence, upon the question of damages, the Goodyear patents of 1844 and 1849.

He then read the deposition of Holbert Smales.

JOHN D. BURCHARD, SWORN AND EXAMINED BY MR. BRADY.

Mr. BURCHARD handed a sealed package of papers to the clerk of the Court, which the clerk opened.

Q. You are a lawyer in the city of New York, in the employment of Wm. Judson?

A. Yes, sir, partially in his employment.

Q. Where and when did you obtain the papers contained in this package?

A. From the commissioner of patents at Washington, day before yesterday, (Wednesday). They were taken from a box in the patent office, marked "Extension case, Edwin M. Chaffee, extension of patent, 81st August, 1886; patent extended."

Q. They were delivered to you sealed, to be handed to the clerk of the Court?

A. They were sealed and delivered to me as they were delivered to the clerk this day.

Cross-examined by Mr. Richardson.

Q. Did you get all the papers in that box?

A. No, sir.

Q. You selected such as you wanted from it?

A. I did.

Q. Were you instructed before you went on as to what papers to select?

A. I was.

Q. Did Mr. Judson give you your directions?

A. Partly; my more immediate directions, however, came from Mr. Brady.

Q. (By Mr. BRADY.) You received a telegraphic message from me on Tuesday, and in the afternoon of the same day you went to Washington?

A. Yes, sir.

Mr. BRADY then read the deposition of Horace H. Day in opposition to the extension of the Chaffee patent.

Mr. BRADY then offered and read a paper addressed to President Fillmore, purporting to be signed by several persons, among others, H. H. Day, in reference to the same extension.

Mr. BRADY next offered to prove, by JAMES S. OAKW, that at the time the agreement was made between the shoe associates, and Hartshorn and Hayward, a consideration was paid by Hartshorn & Co., besides what was expressed in the said agreement.

Objection made to testimony as parole evidence, in reference to a written contract; objection sustained.

LEMUEL S. HARRIS SWORN AND EXAMINED BY MR. BRADLEY.

Q. State your occupation.

A. I am a machinist in the employ of the defendants.

Q. State how the calender of the large machine in the south-west corner of Hartshorn's building is geared—the machine that is taken apart?

A. It is a machine of 4 rollers, geared together with an even motion, the gears being all of the same size.

Q. Is that the machine that is generally used in that establishment, to your personal knowledge, for spreading the sheets of rubber?

A. It is.

Q. What was it sent away for?

A. To have the rollers repaired; the surface became indented by use—by hard substances.

Q. Do you use that friction machine when you have the other machine there? And how does the work done on the friction machine compare with that which comes from the equal motion machine?

A. I am not so practically acquainted with that, except from observation and information received from those who are directly connected—

(Objected to.)

Q. State so far as you know?

A. I am not practically acquainted with that; I have endeavored to inform myself to some extent of it.

Q. (By the Court.) Do you mean by observation or inquiry?

A. By observation. The sheets that come from the large machine, which is now away, are very perfect, firmer, and are considered by all that I have had any conversation with, as better than what come from the friction roller.

Q. To your own observation?

A. It so appears.

Q. Has that little friction machine ever been altered to your knowledge, so as to diminish the amount of friction on it?

A. It has.

Q. How long since?

A. Since I have been there—just previous to Mr. Hayward's sickness.

Q. What was the purpose of making that alteration?

A. The machine did not work to Mr. Hayward's satisfaction; he was unable to get such sheets from it as he liked, and he wanted I should make the alteration, to see if it would not do better.

Q. To what extent was the friction altered by what you did to it?

A. The gears that connected the two rollers were 16 and 22 inches, and I reduced the friction by putting on gears of 18 and 20 inches.

Q. Could you diminish it more than that by altering the gears?

A. That is as much as I could diminish, except to give it an even motion.

Q. (By Mr. RICHARDSON.) You could have made an even motion?

A. I could by making the gears with 19 teeth. I could not with the same number of teeth and a different pitch of gear.

Q. You were present when the jury were there; did you see two machines over which there was some conversation as to whether they were friction machines, or how much friction there was?

A. I was.

Q. What were they used for?

A. For rolling gum.

Q. What was the exact amount of friction?

A. I measured two of them by request of some one of the gentlemen, the motion on the surface of the first was as one to $1\frac{1}{2}$, and the other as one to $1\frac{1}{3}$.

Q. What are these machines used for?

- A. For warming up gum and preparing it for the spreading machine.
- Q. How are the calenders used? with an even motion or otherwise?
- A. There are two with an even motion, one of 4 rollers, and one of three.
- Q. The machine that went away is constructed just like the one there—that large machine?
- A. Yes, sir.
- Q. For what purpose is the fourth roller in that four calender machine?
- A. To perfect and smooth the sheet.

Cross-examined by Mr. Richardson.

- Q. How many of these machines does the India rubber go through from its natural state till it gets into the calender?
- A. I am unable to tell.
- Q. When were these machines made, the rollers of which you measured?
- A. I do not know; previous to my going there.
- Q. When was that?
- A. In August last.
- Q. Did you hear Hartshorn say when they were made?
- A. No, sir.
- Q. You have no means of knowledge when they were made?
- A. No, sir.
- Q. Are they new machines?
- A. One of them is not old; the other is quite old, I should think, by its appearance.
- Q. Have the gears been altered at any time?
- A. Not to my knowledge.
- Q. Did you examine them to see whether they had or not?
- A. I should have known if they had been within the time I have been there.
- Q. They have not been altered since you have been there?
- A. No, sir.

JOHN B. SWEET, SWORN AND EXAMINED BY MR. BRADLEY.

Q. State your occupation.

A. I am with Dr. Hartsborn in the India rubber works.

Q. What is your department?

A. I do not know that I have any department particularly. I make myself useful about the establishment for the interest of the firm.

Q. Do you have occasion to examine the sheets of rubber in the various machines?

A. Yes, sir.

Q. Please state how the sheets that come from the spreading machines that move with an equal motion compare with those that come from the little machine that has a friction motion.

A. The large calender that runs with an even motion is decidedly superior to the smaller. The smaller we do not use only when we are obliged to at the present time.

Cross-examined by Mr. Richardson.

Q. In that small spreading machine is not the spreading done by rollers that have an even motion?

A. I do not know.

Direct resumed by Mr. Bradley.

Q. Do you know in point of fact whether it spreads it on the cloth between them?

A. No, sir, we make sheets; we do not spread it at all.

Re-cross-examined by Mr. Richardson.

Q. Is not the rubber spread by rollers in the small machines that have an equal motion?

A. I do not know much about the operation of them.

Q. You don't know—cannot tell?

A. No, sir. All I know is, the gum goes through and sticks upon the apron and then passes through some rollers that I could not identify here.

Q. You do not know whether the difference arises from the large and small roller, or the even and uneven motion?

A. No, sir. All I know is the sheets are inferior.

NATHAN M. BLAKE, SWORN AND EXAMINED BY MR. BRADLEY.

- Q. Have you ever been employed in the factory of Dr. Hartshorn?
- A. I have.
- Q. During what time?
- A. I commenced in the fall of 1840, I think.
- Q. How long did you continue?
- A. Up to 1850.
- Q. What kind of rollers for grinding were used by Hartshorn in that time?
- Objected to as not material; plaintiff admits that the same kind of machinery is now used.
- Q. When did the doctor make camphene shoes?
- A. When I commenced up to the time I quit work in 1850, I think.
- Q. What was the process used in making camphene shoes?
- A. In the first place we cut it up and put it into the grinder; what we called grinding it in water.
- Q. How was that grinder made?
- A. We had an iron box with a cylinder in it, into which we put the rubber after it was cut up, and it came up through the water. The water came up on to the bed under the cylinder.
- Q. That cut the rubber into small pieces?
- A. Yes, sir; and prepared it for the camphene which is used.
- Q. The next step?
- A. We used to take it and dry it as perfectly dry as we could, and put it into a large can, and put so much camphene to a forty pound batch.
- Q. How much camphene did you use to a batch?
- A. At first we put four gallons to forty pounds.
- Q. How at last?
- A. We reduced it down as we increased the power of the engine or machinery to three, two and a half, and two gallons.

Cross-examined by Mr. Jencks.

- Q. Was this machine abandoned for cutting pieces of rubber when you left?
- A. There are some patterns in the establishment now it may be, probably a little coarser.
- Q. Was it used all the time you were there, or was it given up?
- A. O no, we had quite a number of them; that is, we used one at a time.
- Q. Did you continue to use the one that ran in water?
- A. Yes, sir.
- Q. Was it in use when you left there?
- A. I think it was.
- Q. How many were used?
- A. Only one machine.
- Q. What kind of cylinders does the doctor now use to grind? the same that he used from 1840 to 1850?
- A. Similar, but not exactly like those.
- Q. How are those made?
- A. Similar to those he has now, only those he has now are larger and heavier.
- Q. The same only larger and heavier?
- A. Yes, sir.

MR. HARRIS RE-CALLED AND EXAMINED BY MR. BRADLEY.

Q. In the doctor's establishment do they use a cutting up machine now before the rubber is put into the grinder? if so, how is it made?

A. The first operation passed through is one roller with several teeth passing over a stationary bed; the gum is introduced into that and is carried through.

Q. For what purpose is it used?

A. To break up the gum; it comes out something like a sponge.

Q. That process you use now before you put the rubber into the grinding machines?

A. Yes, sir.

Cross-examined, by Mr. Richardson.

Q. Was that cutting machine run under water?

A. They took the gum from water and put it through the machine, and it comes out into water again; I think the lower surface is partly submerged.

Q. Were those pieces we saw there some that were cut up?

A. Yes, sir.

Q. That is before they come into the grinding mill at all?

A. Yes, sir.

Q. Have you ever been in any other rubber factory?

A. I have.

Q. Did you see how they cut the rubber up there?

A. Yes, sir.

Q. How did they do it?

A. Some cut it with a machine that works like a paper-mill or paper-engine.

Q. Did you ever see it cut up with knives?

A. They cut it into small pieces with knives in the first place; this piece (sample) is cut with a knife.

Direct resumed by Mr. Bradley.

Q. Does the Dr. use this cutting up process?

A. He does.

Q. He cuts it up into strips before he throws it into water?

A. Yes, sir.

SAMUEL C. BISHOP SWORN AND EXAMINED BY MR.
BRADLEY.

Q. State your residence and occupation?

A. I reside in the city of New York, and am engaged in the India rubber and gutta percha business.

Q. To your knowledge, are goods made of rubber, in which camphene and other solvents are used, now used and sold in the market?

A. Yes, sir.

Q. State whether, for the purpose of rubber cloth goods, the use of camphene or other solvent is desirable, as distinct from grinding the rubber, without the use of such solvents.

A. It is; for the majority of cloths it is better.

Q. It is used to your knowledge?

A. Yes, sir.

Cross-examined by Mr. Richardson.

Q. Do you refer to carriage cloths?

A. Cloths for all purposes.

Q. For shoes?

A. It is not much used for shoes except linings.

Q. Do they put linings into India rubber shoes?

A. Most generally—almost always.

Q. Do you refer to lamp-black goods?

A. Yes, sir.

Q. Where are these goods made that you speak of, that are made without a solvent?

A. In a variety of places.

Q. What place in particular?

A. In Harlem, N. Y.

Q. Who manufactures them?

A. The Union Rubber Company.

Q. Are you a member of that company?

A. No, sir.

Q. Were you ever in the factory?

A. Yes, sir.

Q. Have you seen how they make them?

A. I have seen them that work there.

Q. How much solvent did they use?

A. I cannot state.

Q. Do you know they used any?

A. Yes, sir.

Q. How did you know it?

A. I smelt it.

Q. Smelt it in their goods?

A. Yes, sir.

Q. Did they use coal-tar?

A. I think not.

Q. Did they vulcanize their goods?

A. Yes, sir, some of them.

Q. Did they vulcanize the same goods they used camphene in?

A. Yes, sir.

Q. In what kind?

A. Clothing.

Q. How much?

A. A small portion.

Q. What did they use it for?

A. To make the goods fine.

- Q. Did they put it in for a solvent?
- A. Yes, sir.
- Q. Is their machinery there heavy enough to grind without a solvent?
- A. Not so well.
- Q. Haven't they got heavy machinery there?
- A. Yes, sir.
- Q. Can they grind it without a solvent?
- A. Not so rapidly or cheap.
- Q. All you know about their using a solvent is your smelling it in the cloth?
- A. I never was in their preparing room or composition room.
- Q. Now state some place where you know they use solvents?
- A. You can detect it in—
- Q. Answer, in what factory?
- A. In Dr. Hartshorn's.
- Q. Do they use it there?
- A. They use sometimes camphene, and sometimes naptha.
- Q. What do they use it there to make?
- A. Shoes.
- Q. Do you mean, that in the process now carried on in his factory, he ordinarily uses some solvents?
- A. Yes, sir.
- Q. How do you know?
- A. You can detect it in the goods.
- Q. When did you detect it in the goods?
- A. In the compound.
- Q. When did you detect it in the compound?
- A. Any time that you can go there.
- Q. When did you?
- A. Half a dozen times.
- Q. Give us one time?
- A. I have been there every day for the last two or three days.
- Q. And you have detected the solvent in the compound?
- A. You can detect it by smelling.
- Q. I ask you if you did detect it any time you were there within the last two or three days?
- A. My attention was called to it particularly at that time.
- Q. When was it?
- A. It never was, except from the sense of smell.
- Q. Having gone into the factory, you have smelt the solvent?
- A. Yes, sir.
- Q. What did you smell?
- A. Naptha and turpentine.
- Q. Can you distinguish between them, and smell both at the same time?
- A. Yes, sir.
- Q. Did you smell them when you were there?
- A. I did.
- Q. Did that determine the purpose for which they were used?
- A. It is evidence to me that they used it.
- Q. Did you see the work go on there?
- A. Yes, sir.
- Q. Didn't you see that all they put in was a little coal-tar?
- A. I did not go into the composition room.
- Q. You saw them grind rubber?
- A. Yes, sir.
- Q. What did they put on to the raw rubber to prepare it?
- A. It was not done where the grinders were used.
- Q. Didn't they mix their composition where the grinders were used?
- A. Not in the same room; it is mixed before it goes into the grinders.
- Q. Is it mixed in another room?
- A. Yes, sir.

Q. What did they put in it?

A. I do not know; I never was in there.

Q. You don't know that they put raw rubber through the machinery, in the first instance?

A. No, sir.

Q. Do you know they do not?

A. I do not think they do.

Q. How long have you been agent of Dr. Hartshorn?

A. Four years.

Q. Have you been managing to get up this defence?

A. No, sir.

Q. Have you not been active in getting depositions from New York?

A. No, sir.

Q. How many times have you been witness in India rubber cases?

A. A great many times.

Q. Always on one side?

A. No, sir; I have been on both sides; both sides have called me.

Q. Both sides have called you in the same case?

A. No, sir.

Adjourned.

TENTH DAY.

TESTIMONY OF BISHOP, PETERS, O'DONNELL, SCOTT, RAY,
BUCKINGHAM, CANDEE, AND SIMMONS.PROVIDENCE, *Sat., Feb. 3, 1855.*MR. BISHOP RECALLED, AND EXAMINED BY
MR. BRADLEY.

Q. Were you one of the witnesses upon the application for the extension of the Chaffee patent?

A. Yes, sir.

Q. Were you ever occupied or employed in any capacity at the Roxbury factory?

A. I went there in 1835 or '6 as clerk.

Q. Book-keeper?

A. Yes, sir; I also acted, in Mr. Armstrong's absence, as agent.

Q. Describe the calenders used at the time they were getting up the Chaffee machine?

A. There was a small set of calenders, of two or three rollers, for drying out the starch from the muslins, and covering them with rubber.

Q. How were they made?

A. Of iron, some 8 or 10 inches, I should think, in diameter.

Q. Was that machine in the factory while they were getting up what was called "the monster"?

A. It was, in one of the buildings.

Q. Subsequent to getting this machine in operation, were any aprons made; and, if so, how successful were they?

A. There were aprons made before and after the monster was in operation.

Q. How did they succeed in the trade?

A. We sold a great many of them,—both kinds.

Q. Did they or not come back upon you?

A. A great many of them did.

Q. What was the trouble with them?

A. They got soft.

Q. How soft?

A. They would stick together in masses after being packed.

Q. You were asked yesterday what you had done in this case; state precisely what you have done.

A. Dr. Hartshorn requested me, while in New York, to see to getting the deposition of Mr. Atkinson and Marsh; I called upon both these gentlemen, and got them to go before the commissioner and give their affidavits. I also called upon one other gentleman, at the Dr.'s request, to get him to go.

Q. He requested you, when you left New York?

A. Yes, sir; and also wrote me after he went home, to see that it was done.

Q. About what time was that?

A. About the time of the commencement of this trial.

Cross-examined by Mr. Richardson.

Q. Were not these aprons made of turpentine, rubber, and lampblack?

A. They were made before the erection of the Chaffee machine.

- Q. They were made before the Chaffee machine?
- A. Those that were made before the erection of the monster?
- Q. Those that stuck together, and came back?
- A. Some before, and some after.
- Q. Those made before the erection of the monster were made of turpentine?
- A. Yes, sir.
- Q. Were there any aprons made there without the use of turpentine, or something that supplied it?
- A. Yes, sir.
- Q. When?
- A. After the monster was erected we made a great many of them.
- Q. With lampblack in them?
- A. Yes, sir.
- Q. Did any of these come back?
- A. Yes, sir; most of them.
- Q. Who sold those goods?
- A. They were sent from the factory, some to Boston, and some to New York, at different times, where they were ordered.
- Q. Who sold them?
- A. I think Mr. Norris, in New York, sold them.
- Q. Do you remember that he sent any back?
- A. I cannot say positively; I know that was the general reputation of them.
- Q. Did you know that Norris sent them back?
- A. I cannot state.
- Q. Did Day sell them in New York?
- A. I do not know really. I think they went to the warehouse in Pearl street, direct.
- Q. Who sold them in Boston?
- A. I cannot state; I do not remember.
- Q. Did not Geo. Woodman have something to do with the sale of the goods of the Roxbury Company?
- A. He did at one time.
- Q. Didn't he in 1886-7?
- A. I think very likely.
- Q. Can you name one person that sent back even one package after that monster machine was erected?
- A. No, sir; I cannot at present.
- Q. You say this calender machine was made for drying out cloths; where was it used?
- A. In one of the factory buildings.
- Q. When was it used for that purpose? after or before they got the monster made?
- A. Both.
- Q. It was not used for rubber at all?
- A. Not to my knowledge.
- Q. Who built the machine?
- A. I cannot say; it was there when I went there.
- Q. Don't you know that Chaffee built it?
- A. I do not.
- Q. Don't you know it was used for purposes of rubber, but when the monster was done it was put into the brick building for the purpose of drying out cloths?
- A. No, sir.
- Q. Do you know the contrary?
- A. I do not believe it.
- Q. Do you know?
- A. I never saw it done; I have seen cloths calendered there and never any thing else.
- Q. Fix the date when you went to Roxbury?

- A. I think in the winter of 1885 and '86, but I am not sure.
- Q. Might it not have been later?
- A. It was not later; it might have been 1885, or it might have been 1886.
- Q. Don't you know that the monster machine was built before the winter of 1885 and '86?
- A. It was building when I went there.
- Q. It was not built then?
- A. No, it was building.
- Q. How soon after you went was it in operation?
- A. Several months.
- Q. You are positive about that?
- A. Yes, sir.
- Q. How were you enabled to distinguish between goods manufactured by the monster machine and those that were not, and how do you now distinguish?
- A. It is very easily done by a person acquainted with them.
- Q. Give us your present recollection?
- A. They were free from the smell of turpentine.
- Q. Do you now recollect that you distinguished between these goods?
- A. I should have no difficulty in doing so.
- Q. Do you now recollect that you did then distinguish?
- A. It is difficult for me to state after so long a time; but the general fact is known to everybody.
- Q. I want to know whether you now recollect that you distinguished when they came back?
- A. It is impossible for me to say after so long a time.

Direct resumed by Mr. Bradley.

- Q. What is your recollection in regard to the number of cylinders used in the calender part of the monster machine?
- A. My impression is that there were three rollers in that part.
- Q. What was the highest price at which the stock of the company sold?
- A. When I went there I think the stock was worth about \$200 a share.

MR. PETERS RE-CALLED AND EXAMINED BY MR. BRADLEY.

Q. Was the alteration of certain friction rollers in Dr. Hartshorn's establishment, made under your direction?

A. One alteration was made under my direction.

Q. At whose request?

A. Mr. Hayward's.

Q. For what purpose?

A. To reduce the friction.

Q. What was the object?

(Objected to.)

A. I was informed that the object was to make a denser sheet.

The COURT. You need not state what you were informed.

Q. Why was it not made of a perfectly uniform motion?

A. If I might be permitted to state the history as it took place, I shall make myself intelligible. The new foreman in the shop came to me and said it was the request of Mr. Hayward—

(Objected to.)

Mr. BRADY. Mr. Hayward is dead and this is a part of the transaction.

The COURT. The question is why was it intended to have it uniform?

Witness. The machines I first prepared there was very little difference in. They were mislaid, and Mr. Hayward sent his man to me, to tell me to get rid of the friction on that machine. I took the measures to do so, and while measuring it occurred to me that these were the measurements we made previously. I inquired of the foreman, and he said they were mislaid in the shop, and he had never had time to put them on, but he would do it immediately—those that we had prepared with a slight friction.

MR. O'DONNELL RE-CALLED AND EXAMINED BY MR.
BRADLEY.

Q. When you first went to Roxbury, in 1886, when Chaffee was there, was this part of the machine (with the apron) used for grinding or warming up?

A. It was used for warming up; but sometimes when we did not have much to do on the grinding, we used to have it go through this little machine, and then to forward the work, we had some of it go through that one.

Q. Your practice was to put it on the grinder before you put it on there?

A. Yes, sir.

MR. SCOTT RE-CALLED, AS A WITNESS FOR THE DEFENCE,
AND EXAMINED BY MR. BRADLEY.

Q. In 1835 and 6, did they use cold water in any of the cylinders in what was called the monster machine?

A. They did sometimes.

Q. How was it introduced?

A. Into the end of the roller, by pipes.

Q. Were there any calender rollers used there prior to the erection of the Chaffee machine?

A. I believe there were.

Q. What kind?

A. Common hollow calender rollers.

Q. Heated or otherwise?

A. Heated.

Q. How were they made to revolve, by hand or by machinery?

A. By machinery.

Q. Do you know where they came from?

A. I do not.

Q. Were you sufficiently acquainted with machinery at that time to be able to say whether they were such as were in use elsewhere or not?

A. I cannot say.

Q. What do you mean by common calender rollers?

A. I understand them to be such as were used to grind cloths, &c.

Q. Did you assist in setting up this monster machine?

A. I did.

Q. How many rollers were used in the spreading part?

A. Three.

Cross-examined by Mr. Richardson.

Q. What was the size of these calender rollers?

A. Something like 8 or 10 inches, I believe.

Q. In what year did you first see them?

A. In 1834 and 5, I believe.

Q. Did you see any rubber experiments on them in 1834 and 5?

A. I did not.

Q. Did you at any time?

A. I did not.

Q. Don't you know that they were built by Chaffee, or under his direction?

A. I do not.

Q. You don't know where they were built, or by whom?

A. I do not.

Q. Was cold water used in more than one cylinder in the monster machine?

A. No, sir.

Q. Which cylinder was it?

A. The lower one.

Q. Are you sure about that?

A. I think I am.

Q. Was it the cylinder in the grinding or the spreading part?

A. In the spreading machine.

Q. Did you have any thing to do with the sale of the goods?

A. I did not.

Q. Have you any goods manufactured by the monster machine?

A. I have.

Q. Have you any specimens in Court?

A. I have. (Producing them.)

Q. What year were they made?

- A. In 1835 and 6.
- Q. Were these all made by the new process?
- A. They were.
- Q. How did the goods prove that were made by the monster machine?
- A. They proved well.
- Q. Did you have the same trouble with their being returned, as before?
- A. Not that I knew of; I never knew any returned.
- Q. Did you know of goods being returned that were made in the old way?
- A. I did.
- Q. Have these pieces been in your possession ever since?
- A. They have.
- Q. Were you there when Bishop was there?
- A. I was.
- Q. Did you know of their manufacturing aprons?
- A. I believe I did.
- Q. Were these goods manufactured in the same way that aprons were?
- A. They were.
- Q. Did you see these aprons or any of them?
- A. I did.
- Q. How did those manufactured after the monster machine was put up, compare with those manufactured before?
- A. Those prepared with a solvent were bad; those with the machine were good.
- Q. These specimens you have presented are not lampblack goods?
- A. They are not.
- Q. Did they make some aprons of lampblack goods?
- A. They did.
- Q. Have these goods decomposed any?
- A. No, sir.
- Q. At that time was it or not the practice of putting the rubber between two pieces of cloth in making clothing?
- A. I believe they did.
- Q. Were not shoes made that way at that time?
- A. I think they were.
- Q. Was rubber finished up at that time for an outside surface, or was the cloth on the outside?
- A. The cloth was on the outside.
- Q. These specimens are prepared with cloth only on one side?
- A. Only on one side.
- Q. But when they completed it for sale they put cloth on the other side?
- A. We put it on both sides or one as we wanted it.
- Q. Did you coat it over on the outside?
- A. We coated it on both sides frequently.
- Q. For the purpose of clothing and shoes?
- A. I am not sure what it was used for.

Direct resumed by Mr. Bradley.

- Q. Why was it that you did not put the rubber on the outside?
- A. I do not know.
- Q. What was your occupation in that mill?
- A. I did the general repairing, and afterwards run the machine.
- Q. You had nothing to do with buying and selling?
- A. No, sir.
- Q. Is any thing mixed with this rubber that you have shown?
- A. I do not know; it has a dry, coloring matter.
- Q. When was it manufactured?
- A. At the time I was there.
- Q. Were these got up as specimens or not?

A. That I do not know. That colored piece was colored merely to try to see if they could color it, which they frequently did.

Q. Where and how have they been kept?

A. In the house, some of them rolled up and some not, but lying about the house.

Q. You have said that they used cold water in one of these rollers, and you thought the lower one; have you not stated in an affidavit upon this subject that these cold water pipes were used in all the rollers, and that without these cold water pipes it was impossible to manufacture rubber by rollers?

(Objected to, as contradicting their own witness's testimony.)

The COURT. You cannot ask a question to contradict, but you can refresh his memory.

Mr. BRADLEY. I wish the witness's recollection as definite as he can give it.

WITNESS. I am sure as to the lower roller, but I am not sure as to the other.

Re-cross-examined by Mr. Richardson.

Q. Did you save any specimens of turpentine goods?

A. I did not.

Q. If these samples had been made by dissolved rubber, would they have been in the state they now are?

(Objected to; objection overruled.)

A. All that I have ever seen made with solvents are decomposed.

Direct resumed by Mr. Brady.

Q. Do you know any difference in solvents in that respect?

A. I am not much acquainted with solvents.

Q. Do you know whether there is a difference in that respect between camphene and turpentine, whether there is more purity in one than in the other?

The COURT. He says he does not know any difference.

Q. Do you know who first made sheets of pure rubber?

A. We made them after we got the machine up.

Q. Who made it?

A. Mr. Chaffee.

Q. Have you not stated that Goodyear made it?

A. Goodyear did not first make it that I know of.

Q. Have you not so stated?

A. Sheets were made on the machine, but we had not much use for it; when Goodyear came there, he wanted it for some particular use, and it was made in large quantities.

Q. Was it made for practical use by any body before Goodyear?

A. I do not know what it was made for.

Q. What do you mean by saying you had not much use for it before Goodyear came there? Was there use for it after he came there, and not before?

A. I do not know what it was used for.

Q. What was it used for afterwards? Do you know?

A. It was used for shoe manufacture.

Re-cross-examined by Mr. Richardson.

Q. (Handing him an affidavit.) Is that your affidavit, given on the extension of this patent?

A. (Looks it over.) It is.

Affidavit read by Mr. Richardson.

Direct resumed by Mr. Bradley.

Mr. BRADLEY read another affidavit of witness in another case, dated Sept. 15, 1863.

Q. Do you remember that Goodyear was the first person who manufactured sheet gum?

A. He was the first who manufactured it to any amount; sheets were made before.

Q. Were you ever employed in any rubber factory prior to the Roxbury factory?

A. I was not.

Q. Were you ever employed in any since?

A. I have not been.

Q. What was the method of spreading gum on the cloth when you first went there?

(Objected to as already given in witness's examination on the part of plaintiff; objection sustained.)

ALBERT G. RAY SWORN AND EXAMINED BY MR. BRADLEY.

Q. What is your occupation?

A. Bookkeeper for Hartshorn & Co.

Q. Do you know any thing about Chaffee's visiting the counting-room or place of business at any time?

A. I have seen him there at several times.

Q. Do you know how long he has resided in Providence?

A. I think more than three years.

Q. What has been his occupation and place of business during this time?

A. He has been in the rubber factory of Bourn & Brown, either as partner or in their employ.

Q. Is not their rubber factory near to Dr. Hartshorn's?

A. Yes, sir.

Q. Is the same business done substantially there that is done in Hartshorn's?

A. Yes, sir.

Q. How often has he been there to your knowledge?

A. He was there several times in 1848.

Q. He was there in 1848?

A. Yes, sir; he run some pieces of rubber.

Q. State the amount of tariffs paid by Hartshorn for his Goodyear license? (Objected to; the written contract shows the amount; question allowed, to show how much has actually been paid.)

A. \$17,000 or \$18,000 per year: for the last six months \$11,000.

Q. (By the Court.) How much for the prior six months?

A. \$7000.

Mr. BRADLEY. We propose to prove by Francis B. Hayward, that we have a license to use his patent friction machine for spreading rubber on the cloth. The witness has left the court, and we have sent for him.

The Court. What is the date of that patent?

Mr. BRADLEY. March 19, 1850. It is for a process of rolling India rubber cloth, the patent for which was assigned to Hayward by the patentee.

Mr. RICHARDSON. If there is any thing material in it, we will admit that the machine pointed out in the factory for spreading is the machine they claimed under their patent.

WILLIAM A. BUCKINGHAM SWORN AND EXAMINED BY MR. BRADY.

Q. Were you connected with the Hayward Rubber Company of Colchester on the 1st of February, 1851?

A. I was.

Q. Do you know Mr. Walcott Huntington?

A. I do.

Q. Where does he reside?

A. In Norwich, Ct.

Q. Did you see Dr. Hartshorn execute that paper—(understood to be a prior agreement to that of Feb. 1, 1851,) witnessed by Mr. Huntington?

(Objected to; Mr. Huntington is within reach of the Court; objection sustained.)

Q. Were you of the committee that negotiated this arrangement which was made between the associates and Hartshorn and Hayward?

A. I was one of the parties.

Q. How long before the execution of the paper of the first of February, did that negotiation begin?

A. It would be difficult for me to say; it was commenced some time previous.

Mr. BRADY. We offer this witness to show that Hartshorn and Hayward paid \$2000 as part consideration for the transfer of February 1, 1851.

(Objected to as connected with the written contract. Evidence admitted as precedent to the contract.)

Q. You have stated that there was a previous negotiation; what, if any thing, did the shoe associates require as a consideration from Hartshorn and Hayward for giving this license?

A. They required the sum of \$2000, and a relinquishment on the part of Hartshorn of whatever patent right he had which was applicable to the manufacture of rubber shoes.

Q. Was the \$2000 paid by Hartshorn?

A. The \$2000 was paid in the form of a note received by me at Norwich, and sent to the trustees.

Q. What was done with that \$2000 when paid into the treasury?

A. We received one-sixth of it.

Q. And the associates divided it amongst themselves?

A. Yes, sir; it was divided by the trustees, we suppose, from the fact that we received our proportion of it.

LEVERETT CANDEE SWORN AND EXAMINED BY MR. BRADY.

Q. Where do you reside, and what business are you now engaged in?

A. I reside in New Haven, and am engaged in the manufacture of India rubber shoes.

Q. You belong to the corporation of L. Candee & Co., a company which is one of the shoe associates?

A. Yes, sir.

Q. How long have you been connected with the manufacture of India rubber goods?

A. I think I commenced the shoe business in 1848.

Q. When was the corporation of L. Candee & Co. formed?

A. About three years ago. Previous to that, business was done under a special copartnership in my own name.

Q. Where is Charles Goodyear's domicile?

A. I understand it was in Paris the last I knew about it.

Q. He is now in Europe?

A. Yes, sir.

Q. Where did he reside before he went to Europe?

A. In New Haven.

Q. How long did he reside there?

A. A number of years.

Q. When did he go to Europe?

A. I think it was a year ago last June.

Q. Did Chaffee reside in New Haven at any time, and if so, how long?

A. I think he resided there in 1850, and perhaps a year or two previous.

Q. In August, 1850, what was his occupation?

A. I think he was in the employment of Goodyear.

Q. Through the whole year?

A. I should think not through the whole year, but previous to September, 1850.

Q. At New Haven?

A. At New Haven and Naugatuck; at either or both places, when Goodyear was carrying on experiments.

Q. When did you first learn from any source that it was intended to apply for an extension of the Chaffee patent?

A. It was a few months previous to the application.

Q. From whom did you learn that it was to be applied for?

A. Mr. Goodyear held a conversation with me upon the subject of making arrangements with Chaffee for its extension.

Q. Goodyear and you conferred upon the subject of obtaining the extension, and making arrangements with Chaffee for what?

A. For the extension of the patent.

Q. Did you know any thing about an agreement of May 28, 1850, made between Goodyear and Chaffee for the extension right, before or after it occurred?

A. It was in relation to that that I had the conversation with Goodyear. He either stated to me that he had or —

Mr. RICHARDSON—Stop.

Q. You did not see the agreement itself?

A. I do not recollect of seeing it.

Q. Did your company, as one of the shoe associates, agree to procure the extension—unite in it?

A. We did not enter into any formal agreement.

Q. I do not mean an agreement in writing; did they assent to it? Did you aid in procuring any testimony for the extension?

A. No, sir.

Q. Were you present at the examination of Dr. Howe in behalf of that extension?

- A. Yes, sir.
 Q. Where was that?
 A. At Derby, Ct.
 Q. About when?
 A. In August, 1850.
 Q. Who went with you on that occasion?
 A. Mr. Judson.
 Q. You went from New Haven?
 A. Yes, sir.
 Q. Who paid the expenses on that journey?
 A. I paid the expense of horse and carriage; there was not much expense attending it.
 Q. Was Dr. Howe examined in behalf or against the extension?
 A. He was against it, I understood.
 Q. Who appeared for Goodyear and his licensees?
 A. Mr. Judson.
 (Objected to as assuming that Goodyear and his licensees were there).
 Q. Mr. Judson appeared there for somebody?
 A. He was there at the examination.
 Q. Do you know for whom he appeared?
 A. He appeared on the part of those in favor of the extension.
 Q. Do you know who they were?
 (Objected to.)
 The COURT. It has been admitted.
 A. Mr. Goodyear and his licensees.
 Q. Who appeared on the other side?
 A. A gentleman by the name of Gifford, from New York.
 Q. Well, the testimony of Dr. Howe being taken, had you personally any thing more to do with the extension proceeding?
 A. No, sir.
 Q. Were you at New Haven on the 5th of September, 1850?
 A. Yes, sir.
 Q. Did you see Judson, Chaffee and Woodman there?
 A. Yes, sir.
 Q. Where did you see them?
 A. I saw the three together at the house of Mr. Chaffee.
 Q. What were they doing?
 Mr. RICHARDSON. State what you expect to prove.
 Mr. BRADY. That they were engaged in preparing some papers.
 Q. What was the general business?
 A. To execute a conveyance.
 Q. Never mind—a paper?
 A. Yes, sir.
 Q. Did you know Chaffee well at that time?
 A. Yes, sir.
 Q. Do you know Chaffee's writing?
 A. I have seen it frequently.
 Q. Did you receive that letter (handing him a letter) from Chaffee; if so, when?
 A. I received that from Mr. Chaffee on the 6th of September, 1850.
 Q. Whose indorsement is that on the back?
 A. It is mine.
 Q. What is it for?
 A. It is my file mark.
 Mr. BRADY proposed to read the paper, but the Court thought it had better be introduced after the paper of the 5th of September is presented.
 Q. Did you see Chaffee much after that time?
 A. I used to see him occasionally.
 Q. At New Haven and elsewhere?
 A. At New Haven generally.

Q. Do you know when he removed to Providence?

A. I do not.

Mr. BRADY now proposed to read the deposition of Charles M. Keller.

Mr. RICHARDSON wished to be allowed to put in, before that was read, the original argument of Mr. Keller on the Chaffee extension, with Mr. Keller's signature attached.

Question argued as to the admissibility of Mr. Keller's deposition.

The COURT allowed it to be offered so far as it went to prove that Mr. Keller acted as counsel for others than Chaffee, not from what Chaffee said, but from his own knowledge. He is precluded from denying that Chaffee was his client.

MR. SIMMONS RECALLED AND EXAMINED BY MR. BRADY.

Q. In the paper dated September 15, 1841, (the transfer by Messrs. Loring and Simmons, trustees,) what are you and Mr. Loring described as trustees of?

(Objected to; that is shown by the deed. Question argued.)

The Court ruled that there was an ambiguity about the word trustee, and though in the second deed it would seem as though they held without any other right than that contained in the first, yet they held as good a title as the original trustees would have held if they had never conveyed.

Q. Was there, in December, 1840, or January, 1841, any purchase of this Chaffee patent by Messrs. Armstrong, Tyler and yourself, for your benefit?

A. Not to my knowledge. I am confident it could not have been done, because all the papers show that the sale was to other persons, and Mr. Armstrong acting as agent would not have been allowed to meddle with it. He was not a stockholder for a single share to my recollection, and would not have been allowed, as an agent, by those who were then involved in a very large amount of liabilities. Therefore I feel confident that he never had any interest in it.

Q. Was there any agreement between you and Armstrong and Tyler, or either of you as to the Chaffee patent, that it should not be disposed of without their consent and concurrence?

A. I have no recollection of any thing of the kind. I do not believe any thing of the kind could have existed. I have been trying, since I stood here,—after having heard what Armstrong has stated,—to account for his giving such a view of the matter. There was an occurrence, which he may have confounded with that by which he claims to have this patent, and having refreshed my mind by documents, I am quite certain that there was no such conveyance at that time. I propose, if the counsel please, to state what I suppose was Mr. Armstrong's mistake.

Q. What was that occurrence?

A. Mr. Armstrong acting as our agent, we had sold the personal property, real estate, and patents. Mr. Loring, myself, Mr. Tyler (through a man who held his interest in pledge), Ebenezer T. Andrews, Dr. Keep, Mr. Farley, and—I cannot remember the other—(Mr. Farley was the man who held Mr. Andrews' or Mr. Tyler's interest—my impression is that it was Mr. Tyler's)—so that Mr. Loring, myself, Mr. Farley, and Mr. Andrews, who had been holders of original stock, and Dr. Keep, were the parties referred to in that conveyance to Mr. Loring and myself, as trustees. We were the parties that purchased that property at auction. They were the associates entitled to the property which was conveyed to Mr. Loring and myself. It consisted of real estate, patents, and personal property. The personal property was conveyed by common bills of parcels—auction bills; the real estate, by deeds to go on record; the patents by Chaffee, from Chaffee to the corporation, from the corporation to the trustees, from the trustees to us, and from us afterwards to Goodyear, (I think it was). So that the patent went in one set of papers, and the real estate by deeds, and the personal property by bills of parcels. After this thing was done there were remnants. There had been lands and property on the east side of what is called Stony River sold at auction that the purchasers did not take. When the sale was made of lands and the principal property on the west side, it was not known that they would not take it. There were some remnants of property also at the old establishment—a few thousand pounds of rubber perhaps, or some small amount, necessary to close up every thing. Now the most of the property had been sold and conveyed; but on the east side a few lots of land were not taken by those who had purchased it at the prior sale, and it was necessary to close that up. Mr. Armstrong was acting as agent then. I recollect distinctly that Mr. Tyler was there. So when we were about to purchase these lots, it was not thought to be worth while to make much ado about it, and bid over each other; so says Mr. Tyler,

you may bid off these lots if you want them, and give me a share, or I will, and you may take a share. Mr. Armstrong standing by, intimated that he would like an interest in that; and, feeling kindly towards him, I said yes. I think there were three lots. There was some little personal property in the same category. I had one of the lots. They were all conveyed to me; I bid them off. I settled with Mr. Tyler for his by exchange for another lot; I gave Mr. Armstrong a deed of the lot which he was to have, and received my own, and kept it. I afterwards, when Armstrong failed, purchased of his assignee his interest in the lot, which I had conveyed to him by the first purchase. At that time there were some remnants of old debts, and these were sold to close up. They were considered bad debts, and Mr. Armstrong wanted to be interested in these. I said he was welcome, and I bid them off for a song. I never got a dollar for any portion of it. I sent the best of them to Armstrong, and he never accounted for them I am sure. He thought he could collect them in New York; but, as far as I recollect, he never collected a dollar. This was a totally different transaction, and had nothing to do with the patent any more than with this court.

Q. The original parchments of these four patents that belonged to the Roxbury Co., including the Chaffee patent, the title deed itself, were they ever in your possession?

A. I think it is probable, I might have had them at some time when I was making conveyances.

Q. Were they in your possession after the time when you received that trunk? were they ever in that trunk?

A. When I was summoned here I was asked for these original papers. I looked with great care, as I had done before, and could not find it. If I ever had it I cannot now say that I had. All I can say is, I have no recollection of ever having it in my custody after closing up the business. For a considerable time before these chests were sent to my place, they had been in the possession of Mr. Tyler. He was a very efficient man, and had much to do with this transaction. They had been at his place, I should think, for a year or two—perhaps more—perhaps five or seven. I cannot tell if it was in 1841. My impression is, that it was up to 1849 before I got them. And then when he was tired of keeping them there, as I had more room than he had—a little alcove where he said they could be shoved in—he said he was going to send them up to me. He did, and whether Armstrong came up with them I do not remember.

Q. Did they contain these original parchments?

A. So far as I recollect I never looked for these papers, or even these records, until they were called for to be used in a trial in New York or New Jersey, and then application was made to me pretty perseveringly. I went into an examination to see if I could find them, and I do not now remember that I was asked to look for any parchments, or that there was any question about parchments; but I do remember that a great effort was made to find the records, and that we could not find them. I remember also that I had occasion to get them. I afterwards became three-fourths owner (with my brother-in-law, Mr. Fisher, who obtained a quarter) of the old establishment; and when we were about selling it to the Cunninghams and turning it into a carpet factory, Mr. Bowdich was employed to see if the title was all right. He wanted these records, and I made a careful examination, but could not find them. It was greatly important to satisfy him.

Q. Did you ever see the original parchments?

A. I cannot say that I ever did see them, but as to the search, I could not find them.

Q. You do not remember ever having seen them?

A. Ahem! No, sir, I do not. I have a recollection that at some time I had an English patent parchment in my possession; but I have no recollection of this patent ever coming into my possession. I should have supposed that I hadn't it.

Cross-examined by Mr. Richardson.

Q. You told us that if you were at home you could estimate how much retaining fee you had in any case?

A. In this case.

Q. In any case?

A. No, sir; there was something said to me, and I believe I made this remark, that I would not say that it was or was not my impression. Mr. Keith was my partner, and I am satisfied from my recollection, that, in reference to something about a patent, and to Goodyear, somebody paid to my partner \$100, for services rendered, and I think it was about getting a renewal of a patent.

Q. Do you recollect at the time you took these trunks, you gave a receipt for them to anybody?

A. I do not know that I did or not. I think it is very possible, if anybody asked me to give a receipt I should have done it.

Q. (Mr. RICHARDSON read what purported to be a copy of a receipt from Mr. Simmons to Mr. Armstrong for two large chests, containing the books, papers, and patents purchased of the Roxbury Company, the new association being the joint property of Messrs. Tyler, Armstrong, and Simmons, together with a stipulation not to part with any of the same without the consent of all parties.) Did you ever sign such a receipt as that?

A. I have no recollection of it. I don't believe I ever did. I do not know but I did, but I do not recollect.

The Court said that the witness had a right to see such a receipt, if it was in court, and that he would not allow it to be produced hereafter, if in court, unless it was produced now.

Mr. RICHARDSON said he had sent to New York to obtain the original, and if obtained, perhaps it would be offered. It was furnished a year ago upon a statement of this transaction. He did not wish to take any unfair advantage of the witness or to impeach him.

Adjourned.

ELEVENTH DAY.

PROVIDENCE, *Monday, Feb. 5, 1855.*

Upon the assembling of the Court it was announced that one of the jurors was sick and unable to be present, but that he would probably be able to attend Court on Wednesday. The counsel for the plaintiff proposed to go on and read the testimony to the absent juror when he should be able to attend, from the reporter's notes. The counsel for the defendants were unwilling to do so, as they had now arrived at that part of the case where there would be contradictory evidence, and they wished the jurors to judge of the evidence from the *manner* of the witnesses upon the stand. They were willing to let the plaintiff go on with the rebutting evidence upon the validity of the patent. The counsel for the plaintiff were not prepared at present to take up that part of the case, accordingly the Court adjourned till Wednesday.

TWELFTH DAY.

Wednesday, Feb. 7, 1855.

TESTIMONY OF MARING, HORSFORD, HAYWARD, JUDSON,
AND WOODMAN.MR. MARING RECALLED AND EXAMINED BY MR.
BRADLEY.

Q. State to the jury when you first went to the Roxbury factory?

A. My present recollection is that it was late in the fall of 1834.

Q. I will ask you whether the Chaffee machine was kept in any secret or private apartment for some period of time?

A. The building that was erected with reference to that machine, was some quarter of a mile or more from where the original building had stood, and my business was at the old place up to the time the new building was completed, or after, and I was there but seldom. After the building was inclosed, and the machinery put in, it was generally understood that they did not want much company there, and I never went in there. I do not know as I ever offered to go in or was refused. It was the understanding that they did not care about all hands going there until after it was completed. I believe I was there and saw all parts put in.

Q. How early did you first see it as a whole?

A. It must have been the latter part of the winter or early in the spring of '36—perhaps March, as near as I can fix it in my mind now.

Q. (By the Court.) You mean the early part of the winter of 1835, or March, 1836?

A. I mean the winter of 1835 and 6, and I should think it was the latter part of the winter, or in March, 1836.

Mr. BRADY here stated that the subscribing witness to the paper of the 1st of February, 1851, Mr. Huntington, was in town yesterday, and Mr. Jenckes saw him and agreed to waive the calling him on as a witness, and let the paper be read in evidence. The agreement is between Hartshorn & Co. and the shoe associates, to give the associates a right to use Goodyear's patent of the 24th of July, 1838, for an improvement in the manufacture of gum elastic shoes.

PROF. EBEN NORTON HORSFORD, SWORN AND EXAMINED
BY MR. BRADLEY.

Q. State your residence and occupation.

A. I reside at Cambridge; I am Professor of Applied Science in Harvard University.

Q. In connection with the Lawrence Scientific School?

A. Yes, sir; that is a branch of the Harvard University.

Q. Have you ever had occasion to inquire into the chemistry of India rubber?

A. I have.

Q. To what extent?—how much time did you devote to that branch of chemistry?

A. I have experimented with India rubber with a view to find out its properties and its susceptibilities to useful purposes, much of the time for the last two and a half years.

Q. State whether coal-tar is a solvent of rubber or not?

A. In the same sense that oil of turpentine, æther, and ethereal oils generally are solvents; coal-tar is a solvent of rubber.

Q. Which is the most efficient solvent in that sense of the word—spirits turpentine or coal-tar?

A. Coal-tar and spirits turpentine differ in purity, according to the care with which they have been prepared, and according to the nature of the coal from which the coal-tar has been distilled. Some varieties of coal-tar are more energetic than some varieties of spirits turpentine.

Q. How is it with coal-tar at the gas works in cities?

A. That is the coal-tar with which I have experimented; that serves the same purpose that oil of turpentine serves.

Q. What is the difference between turpentine and camphene in that respect?

A. The ordinary turpentine contains a little rosin dissolved in it. Spirits turpentine as it issues from the evergreen trees, certain varieties of them, is quite pure. Upon exposure to the air it almost immediately becomes coated with rosin, and in a little while the whole mass becomes nearly solid. In this condition it is scraped from the trees. From that mass the turpentine of commerce is distilled. The whole is thrown into a distillery, and the turpentine is distilled off. If this is exposed to the air—for example—if it be mixed with cotton, loose, so as to be exposed on a large surface, in a very little while it becomes gummy with a sort of rosin. Rosin may be regarded as a sort of rust of pure turpentine. If you distill the ordinary impure turpentine you get camphene.

Q. What is the relative value of camphene and turpentine?

A. Camphene is more valuable.

Q. Because it is free from rosin?

A. Yes, sir.

Q. Does rosin dissolve pure turpentine or absorb it?

A. No, sir. Any body that possesses the power of dissolving any substance—like water for example—may have the capacity entirely consumed. Water is capable of dissolving a given amount of salt or sugar, but when it has become saturated with that sugar or salt, its solvent power is diminished. So when camphene has dissolved in it a portion of rosin, its capacity for any thing else as a solvent is diminished.

Q. Is the rosin which is held in the turpentine a solvent of rubber at all?

A. Not as much.

Q. Are these articles—coal-tar, camphene, &c., strictly solvents of rubber?—what is their operation upon the rubber?

A. The rubber of commerce is derived from the milk of certain plants that flourish in the torrid zone. This milk is white, for the same reason that com-

mon milk is white. It contains little vesicles—little bubbles which are suspended in it. Common milk contains butter suspended in little cells. If this be permitted to stand, in the case of milk, the cream it contains—the butter—rises to the surface. The same is true of India rubber milk. The caoutchouc proper is lighter than the body of the milk, which is water, and rises to the surface. This when examined with a microscope, is found to be made up of minute cells, rounded—very minute eggs; and that is the article we obtain from South America, the East Indies, and Africa, under the name of rubber of various kinds. When that rubber, which is a mass of compressed cells, is subjected to the action of ether, turpentine, the oil of lemons, or coal-tar, it swells up somewhat in the same way that a sponge does when water is applied to it—though not precisely so. The difference is this, between all that class of substances that are similar to turpentine in their nature: for example, naphtha that is obtained from rock oil, the oil of lemons, the oil of rosemary and lavender—between all that class of bodies and India rubber there is a common attribute; they resemble each other. I will make that a little more clear by stating that the ingredients of which rubber is itself composed, are carbon and hydrogen; and turpentine is composed of the same, and the oil of lemons is composed of the same. They do not any of them contain oxygen. Bodies that have these common properties have certain chemical affinities for each other; that is to say, they enter into more or less of a combination. In the case of the rubber, it is a compound of very feeble character, as may be illustrated in this way: If a piece of rubber has been soaked with camphene and is laid upon a brick, and subjected to a little pressure, the brick will withdraw quite all the camphene from the mass of swollen rubber, showing that the affinity between this camphene and rubber is less than the attractive power of the brick under the influence of pressure: If you put a piece of rubber that is softened and swollen in this way, and it swells under favorable circumstances to some sixty times its original volume, between pieces of blotting-paper, and subject them to pressure, the blotting-paper will take all this camphene, lavender, or cinnamon to itself, leaving the caoutchouc not quite, but pretty nearly free from the ether or turpentine, or whatever similar substance may have been used.

Q. What is the effect of mixing with the rubber plaster of Paris, sulphur, lead, and other powder ingredients?

A. The effect of the powder—a powder that does not unite into combination with the rubber at all—is that of a simple divisor.

Q. What is its practical effect in preparing the rubber for use?

A. In the rollers?

Q. In the rollers...

A. It would increase the friction for one thing, and increase the extent of surface of the camphene or coal-tar, or whatever may be used as a solvent; the increase in the extent of surface increases the facility of action, just in the same way that finely powdered sugar dissolves more readily than a solid compressed lump, and in the same way that water spread upon a handkerchief, will evaporate more than it will in the bottom of a tumbler. The extent of the surface increases its divisor. That is not all; I might go into some nice points about lead, gypsum, and certain other powders.

Q. State the practical result, whether putting such a compound into rubber facilitates the preparing of rubber?

A. It facilitates it by increasing the extent of surface, the amount of friction and the amount of heat—the amount of heat is a consequence of the friction.

Q. You therefore used less heat and force where you have such a compound than where you have pure rubber alone?

A. Yes, sir.

Q. Do you require more solvent or less for preparing rubber to spread upon sheets of cloth, than you do to make sheets of rubber to manufacture into shoes?

A. You do.

Q. In other words, you require less solvent where you want to make sheets,

than where you want to dissolve rubber to spread it upon the fibres of the cloth?

A. Yes, sir.

Cross-examined by Mr. Richardson.

Q. How long have you been experimenting in India rubber?

A. About two years and a half occasionally.

Q. By whose employment?

A. At my own instance at the outset.

Q. Since then?

A. I was employed by Mr. Hayward, of Colchester.

Q. Nathaniel Hayward, one of the defendants in this suit?

A. Yes, sir.

Q. How long ago was that?

A. About two years ago, I should think,

Q. Did you continue up to now?

A. At intervals. I have had but little to do with India rubber for the last six months.

Q. Did you ever dissolve any rubber in turpentine?

A. I have subjected it to the action of turpentine.

Q. So as to make it pasty and soft?

A. Yes, sir.

Q. What process did you adopt to do it?

A. I merely exposed it to the action of camphene or turpentine.

Q. Did you cut up the rubber?

A. Yes, sir.

Q. How fine?

A. Into small bits; my use was of a small amount, and I put it into a small tube for action.

Q. How much did you take for the experiment?

A. I should think not more than an ounce in that form.

Q. What is the largest amount you ever, at one time, submitted to solvents?

A. I do not recollect having submitted any considerable amount.

Q. Do you recollect that it was more than a few ounces?

A. No, sir.

Q. What did you put that into?

A. A glass tube.

Q. How large was that tube?

A. Three quarters of an inch in diameter, and about six inches long.

Q. Open at both ends?

A. No, sir.

Q. A straight tube?

A. Yes, sir.

Q. What did you cut up the rubber with?

A. A knife or a pair of shears, perhaps.

Q. Then what did you put in as a solvent?

A. Camphene.

Q. How much camphene did you put in, by weight or volume?

A. I should think about two volumes to one of rubber.

Q. Did you cover the rubber in the tube with the camphene?

A. Yes, sir.

Q. What did you submit it to then?

A. I let it stand.

Q. Do you remember precisely how long you let it stand?

A. I do not; I should think two or three days. I have no special recollection about it, beyond the fact of having made that experiment, with a good many others, with a view to find out the action of different agents upon rubber.

Q. In what condition did you find it?

- A. My recollection of it is that it became, on the outside, gelatinized, soft, pasty.
- Q. Didn't it strike through?
- A. I should think it did, but it was not equal in all parts.
- Q. (Handing witness a specimen of dissolved rubber), Did it look like that?
- A. In the degree of softness?
- Q. Yes, sir.
- A. My impression is that it did not vary very much from this, but my first thought was that it was a little softer than this; but I would not like to state about that. The experiment was not made with a view to find out any thing more than the general result.
- Q. Did you ever submit rubber to coal-tar?
- A. Yes, sir.
- Q. How much rubber did you have at any time?
- A. I suppose half a pound.
- Q. Did you cut it up?
- A. No, sir.
- Q. You took it in a solid lump?
- A. Yes, sir.
- Q. What sort of rubber was it?
- A. A pure rubber.
- Q. Was it in the shape of bottles?
- A. It was.
- Q. Did you weigh it?
- A. No, sir.
- Q. What did you put it into?
- A. Between a pair of rollers.
- Q. Where did you do it?
- A. In my laboratory at Cambridge.
- Q. How large were the rollers?
- A. They were about $2\frac{1}{2}$ inches in diameter and about 18 inches long.
- Q. Did you have them put in motion?
- A. Yes, sir; they were turned for me.
- Q. Did you put in coal-tar?
- A. I did.
- Q. How much, in bulk or weight?
- A. I could not tell how much, but I should think it was, as nearly as I can recollect, in the proportion in which rubber was wrought at Mr. Hayward's establishment.
- Q. I do not know any thing about his establishment; I want the quantity in pounds or bulk?
- A. I do not think I can give a more definite answer than that.
- Q. You don't know how much?
- A. No, sir.
- Q. Do you know that you did use ten pounds?
- A. Yes, sir.
- Q. Three pounds?
- A. Yes, sir.
- Q. One?
- A. Yes, sir.
- Q. Half a pound?
- A. Yes, sir.
- Q. A quarter of a pound?
- A. Yes, sir.
- Q. How do you know that if you cannot fix the amount? What implement did you have to hold it in?
- A. I had a small cup.
- Q. How large a cup?
- A. Two-thirds the capacity of that glass, perhaps.
- Q. Don't you know whether you used more than one?
- A. I took it out with a glass rod, which dipped it up as you would take up tar with a stick.

- Q. You kept it constantly on?
- A. No, sir.
- Q. Did you saturate the rubber with it?
- A. No, sir.
- Q. You put it on, and continued turning the rollers?
- A. Yes, sir.
- Q. Did you bring it to a pasty form?
- A. Yes, sir.
- Q. How long did it take you?
- A. I should think twenty minutes or half an hour; it may have been less.
- Q. You brought it down soft?
- A. Into that pastry condition in which it is when spread upon cloth ordinarily.
- Q. Did the rollers get hot?
- A. They were heated before the process commenced.
- Q. How were they heated?
- A. By lamps.
- Q. And kept hot during the time?
- A. No, sir; heated at the outset and kept hot afterwards.
- Q. Turned by hand?
- A. Yes, sir.
- Q. By one man?
- A. Yes, sir.
- Q. This half a pound of rubber kept going through and through; did you ever try a piece of rubber by submitting it to coal-tar without rollers being applied to it at the same time?
- A. Yes, sir.
- Q. How much rubber did you use in that experiment?
- A. I should think, not to exceed an ounce.
- Q. You cut it up, I suppose?
- A. I did not.
- Q. What did you do?
- A. I laid the pieces together with coal-tar between them.
- Q. How long did it lay?
- A. In regard to that I am not definite; it was merely with a view to ascertain, as I stated, the action of these bodies. I presume that it remained there—perhaps you don't care about the time.
- Q. You can tell whether it was a month or a day?
- A. I don't know but it lies there still.
- Q. Did it ever become dissolved and soft, like this I showed in the dish?
- A. Not so soft as that.
- Q. How soon after you put it there did the action become perceptible?
- A. I did not notice either of them till the day following the institution of the experiment, but about that I am sorry that I cannot be more definite.
- Q. When you did notice it you noticed the action?
- A. Yes, sir; that it was softened.
- Q. You found then that coal-tar was a solvent?
- A. Yes, sir; in that sense.
- Q. That it had a tendency to dissolve India rubber. Have you found out what property there is in coal-tar like the properties of turpentine that dissolves?
- A. Yes, sir.
- Q. What is it?
- A. Coal-tar contains, according to the character of the coal distilled, more or less than about seventy-five or eighty per cent. of an oil that acts upon the rubber in the same way. A portion of that is known as naphtha, and is sold and used under that name.
- Q. Then it is the naphtha in coal-tar that produces this effect?
- A. Not alone.
- Q. What then?
- A. There is a oil allied to naphtha, and at a higher boiling point that produces the same effect, though not quite so energetic.

Q. Both contained in coal-tar?

A. Yes, sir.

Q. Take coal-tar and submit it to heat suddenly, and what escapes from it?

A. Naphtha.

Q. What is the boiling point of naphtha?

A. I cannot tell you.

Q. Is it lower than water?

A. I should think it was below 200.

Q. You think it is below 200?

A. I cannot say. I have not refreshed my recollection.

Q. Don't you know that there are authorities upon the subject?

A. There are; I know this; that naphtha is exceedingly volatile.

Q. That is the point I was getting at?

A. I merely did not recollect the temperature at which it boils; I know it is a low temperature.

Q. Don't you know it is very much lower than water?

A. I simply do not recollect about its temperature. I have not directed my attention in such a length of time to the subject that it has entirely escaped my memory. But I should say it was one of the oils that boil at a low temperature.

Q. Does heat applied to it throw off the naphtha very quick?

A. Yes, sir; below the point at which it would throw off the balance of the oil which contains another body that solidifies at a temperature somewhere about fifty degrees.

Q. That is the other oil beside the naphtha?

A. Yes, sir.

Q. It would throw off both, but the naphtha would go off first?

A. Yes, sir.

Q. Wouldn't it throw it off before it reached the boiling point?

A. Certainly. I do not mean to say the whole of it, but enough to smell it, as is the case with camphene and the other ethereal oils. All of them are diffused very rapidly in the air.

Q. As soon as it becomes very hot it would all evaporate?

A. With time; no such thing takes place instantaneously; it has to be converted into vapor by the absorption of heat, and that takes time.

Q. It would go off very quick?

A. It would.

Q. How long would it take to evaporate half a tumbler full if spread upon a surface with heat at the boiling point of water—of naphtha in the coal-tar—to throw the naphtha off from the coal-tar?

A. That would take very much longer than naphtha by itself. The dead oil in the coal-tar, which is the other oil associated with the naphtha, has a very much higher boiling point. It contains a body that is now wrought into candles and paraphene in Ireland. It possesses the property of acting upon rubber. Naphtha would go off promptly if the surface was extended. If you spread it on a handkerchief it would go off, whereas, in a tumbler it would stay longer. So with camphene; if mixed with this dead oil it would evaporate very slowly.

Q. Mixed with this dead oil how long would it take to evaporate a tumbler full of naphtha spread over a surface of four square feet at 200 degrees of heat?

A. I should think it would not take a very great while; but I have never made the experiment.

Q. Would it take two minutes?

A. Yes, sir.

Q. Five?

A. If I were to make a simple estimate from what I know of its properties I should say much more than that.

Q. It is in the constant process of evaporation while subjected to heat, both the dead oil and naphtha?

A. Yes, sir, that is so of all these ethereal oils.

Q. And thus loses constantly in its qualities of a solvent, of course?

A. Solvents of the body upon which it rested.

Q. You never have fully and finally dissolved rubber with coal-tar, have you?

A. No, sir.

Q. Do you know the fact that rubber never can be made hard after it is dissolved by coal-tar?

A. It cannot be made hard when dissolved by any ethereal oil entirely of itself.

Q. Do you mean spirits of turpentine?

A. Yes, sir. Ether, and all the agents that have been employed upon it, leave it in such a condition that after a time it is more or less adhesive.

Q. Can it ever be made hard so as to be of any practical use after it has once been dissolved by coal-tar, (I will confine it to that) and become as soft as this in the dish?

A. Macintosh and Hancock in their early experiments by mixing powders with it—

Q. We know about those experiments.

A. I have repeated these experiments.

Q. Confine yourself to coal-tar.

A. Do you ask in relation to coal-tar and rubber alone?

Q. Yes, sir.

A. I never have succeeded except by a mixture of insoluble powders.

Q. What did you mix to make it hard?

A. In repeating Hancock's experiments I mixed talc finely powdered.

Q. In that instance did you harden the particles of rubber at all, or only combine another article which was hard and thus secrete the softness of the particles of rubber?

A. The withdrawal of the solvent was effected in the same way that the brick that I mentioned a little while ago withdraws it.

Q. And then it became hard?

A. I take it that is the action; that I should think, as an off-hand reply, was correct.

Q. Are you a professional chemist?

A. I am.

Q. You have made it your study?

A. Yes, sir.

Q. You are not a professor of chemistry?

A. I teach nothing else—analytical chemistry. My profession is the application of science to the arts. That is the particular department of science intrusted to me.

Q. You give your opinion as a chemist that the way these foreign substances render the rubber hard is by drawing out the solvent from the particles of rubber? that it quits the cells of the rubber and is absorbed?

A. I was stating then in regard to the use of talc in this experiment. I was stating that I repeated Hancock's experiment; and as an off-hand reply, without thinking more of it, that is what I should say. If I were asked for a philosophical solution of it I would like to think about it a little.

Q. You are not quite certain, then, that it is right?

A. It is difficult for me to say how the talc or gypsum could act in any other way. And when I speak of powders I do not include sulphur, which acts in a very different way; and the oxide of lead acts differently.

Q. But you think these powders you mentioned act as a brick does, to draw out the solvent?

A. I do not now see any other action; but I should not care to give that as the whole action. Allow me to add this: that, withdrawn by the powder, it would have an opportunity to exhale, so that the solvent, so called, would not remain in the mass of the coating. The powder withdrawing it in the same way that the brick does, by reason of capillary action, it then exhales. It is a

volatile body, that does not remain in the mass, but, through the medium of this powder, its capacity to volatalize is affected.

Q. How large a piece of rubber was it?

A. I suppose I made some 600 different experiments of various kinds.

Q. With coal-tar?

A. No, sir. I could not recollect precisely the size of these. My apparatus was small, and I do not think in any case the quantity exceeded from half a pound to a pound.

Q. Do you remember submitting them to coal-tar?

A. Yes, sir.

Q. And fully dissolving them like this in the jar?

A. No, sir; I did not prepare them in that way. I put two pieces together, with the coal-tar between.

Q. Then how did you apply the powder?

A. That was a case where I applied the coal-tar directly to it.

Q. Was that when you run it through the rollers?

A. That was another experiment.

Q. But when you did not run it between the rollers, and did not place it together, and put the coal-tar between; when you applied the coal-tar directly to the rubber, what was the result of that experiment?

A. The coal tar applied directly to the rubber was simply the case of putting the coal-tar between two pieces of rubber.

Q. Then did you apply your powders?

A. Not to that one, but to others I did.

Q. How did you apply the coal tar to those others?

A. With the aid of rollers.

Q. Give us the exact proportion of the constituents of coal-tar?

A. Coal-tar is a mixed product of that portion of what may be derived from any bituminous coal from heat, which is not sufficiently volatile to go off into the circulating pipes. When subjected to heat it is resolvable into three bodies: naphtha (of which I have spoken), dead oil, and pitch. The pitch is itself still an oil; but when the distillation has reached a point where the dead oil has all gone off, the pitch begins to decompose and smoke, and there it is brought to an end. The pitch has its peculiar use, the dead oil its peculiar use, and so has the naphtha. The proportions vary, according to the kind of bituminous coal. The cannel gives one result, the bog coal another, and the coal in this country still another, according to locality. I would not like to be precise, but I should say the pitch varied from 15 to 30 parts; the naphtha, from 5 or 6 to 30, and the dead oil would be the balance of the parts, varying as it will. I should think the dead oil and naphtha, which are more nearly related to each other, embrace, as a general thing, over three fourths of the whole.

Q. What is the effect of the pitch as a solvent?

A. The action of pitch would be less energetic than either of the other two.

Q. Wouldn't it be adverse to the solution?

A. I am correct in saying that it has some action, but is less energetic; but if you ask whether a mass of it would be deleterious, I should say that a large mass would be deleterious to the rubber. So large an amount as to be equal to what we claim the solvent capacity would be so.

Direct resumed, by Mr. Bradley.

Q. What you have said in regard to the properties and effects of rubber is derived solely from your own experiments and from your studies of the experiments of others?

A. I have intended to read all that has been written upon the subject of rubber, to aid me in my experiments. It is possible something has escaped me; but I have the impression that nothing has, though I may not retain it all.

Q. Which is classified as the most powerful solvent of rubber, coal-tar or turpentine?

A. It depends upon the purity of the article.

Q. You do not know as a matter of fact what kind of coal-tar is made in this city?

A. No, I do not. Some samples of turpentine, which contain considerable rosin in solution, would be inferior to some samples of coal-tar.

Q. When coal-tar was mixed with the rubber, and rolled in the rollers, the naphtha and dead oil evolved would have intermixed, chemically and mechanically, with the rubber?

A. It would.

Q. It would not pass off into the air? Is tale of which you spoke a solvent? Is it similar in its nature to plaster of paris?

A. In its fruition I conceive it is.

Q. In that process?

A. Yes, sir.

Re-cross-examined by Mr. Richardson.

Q. Is the pitch in the coal-tar like rosin or unlike it?

A. I have already stated that pure turpentine, as it issues from the tree, contains simply carbon and hydrogen, and that pure camphor contains the same perfectly pure, and that naphtha contains the same. I may be permitted to remark, that there are two other kinds of coal-tar. The benzoin contains no oxygen whatever, and rosin contains oxygen, and pitch contains oxygen with carbon and hydrogen. The rosin and pitch I am speaking of as being rasts of the other bodies.

Q. Well, you have said, that by extracting the rosin from the turpentine you made a better solvent?

A. Yes, sir.

Q. Then rosin is not a good solvent?

A. Rosin is a solid, and if you warm it it then possesses properties in common with camphene—it becomes liquified.

Q. But not so good?

A. Not so good.

Q. Are they not injurious upon camphene as a solvent?

A. If you ask me if equal weights of camphene pure and camphene containing rosin in solution are to be employed, I should say the camplene was decidedly better without rosin than with it. So I would say in regard to naphtha.

EDWIN HAYWARD, SWORN AND EXAMINED BY MR. BRADLEY.

Q. Are you a son of the former partner of Dr. Hartshorn?

A. Yes, sir.

Q. How long have you been occupied or employed at the factory of Hartshorn and your father?

A. About four years.

Q. Were they during the early part of that period in the practice of using coal-tar and the compound of sulphur, lead, and plaster of paris, which they now use?

A. Yes, sir.

Q. They were using the same things prior to July, 1855, that they are using now?

A. At this time?

Q. Were they using the same things in 1850—the latter part of the year, that they were using now?

A. I could not say.

Q. Your knowledge only goes back four years?

A. Only four years.

Cross-examined by Mr. Richardson.

Q. Your information does not go back to 1850?

A. No, sir.

Q. The last four years they have been using exactly the same thing they do now?

A. Yes, sir.

Q. All the time they used the same amount of coal-tar?

A. Yes, sir.

Q. They put it on with that little dish all the while, in the same manner?

A. Yes, sir; they might vary it a little.

Q. What other ingredients do they use in the rubber? what do they mix with it when they grind it?

A. They mix paints.

Q. What kind of paints?

A. Leads.

Q. What else?

A. Plaster of paris.

Q. What else?

A. Lampblack.

Q. What else?

A. Sulphur.

Q. How much rubber do they make up in a batch?

A. Eight pounds.

Q. How much does the whole batch, with the ingredients mixed with it, amount to?

A. About twenty pounds on the average; sometimes it might be a little less.

Q. That is not quite half rubber?

A. No, sir.

Q. They put it into the machine in that state?

A. When we put it in, in that state, we put the paints with it.

Q. You put it into the machine first raw, and then put the paints to it afterwards?

A. We put the tar to it and then the paints.

Q. But when you come to spread it it weighs as much as twenty pounds?

A. Yes, sir.

Q. That you say has been the process for four years?

A. Yes, sir.

Q. Ever since they commenced making the kind of shoes they manufacture now, so far as you know?

A. Yes, sir.

Q. Do you know what a pair of shoes costs—the average cost at the present price of rubber at Hartshorn's factory?

A. I could not tell you.

Q. You don't know?

A. No, sir.

Q. Couldn't you state pretty accurately?

A. That is something I never troubled myself about.

Q. Which costs the most, rubber or the other ingredients?

A. I should not think there was a great deal of difference.

Q. How many pairs of shoes will a batch of twenty pounds make?

A. I could not tell.

Q. Does not the compound cost less than four cents a pound?

A. No, sir.

Q. I mean the compound that is put with the rubber?

A. No, sir.

Q. What is plaster worth a pound?

A. I could not tell.

Q. What is lead worth?

A. I could not tell.

Q. Sulphur?

A. I could not tell that.

Q. Lampblack?

A. I could not tell that.

Q. How then do you say it costs more than four cents a pound?

A. I do not know exactly, but I know it costs more than that; I think it does, at least.

Direct resumed by Mr. Bradley.

Q. Did you ever have any thing to do with Dr. Hartshorn's factory in buying articles?

A. No, sir.

Q. Did you have any thing to do with the books in making up the accounts?

A. No, sir.

Q. I understand you to state that the mass of the compound weighing 20 pounds, contains but 8 pounds of rubber?

A. (No answer.)

WM. JUDSON SWORN AND EXAMINED BY MR. BRADY.

- Q. What is your present residence?
 A. New York city.
- Q. What is your business?
 A. I am attending to the patent business of Mr. Charles Goodyear.
- Q. How long have you known Mr. Goodyear?
 A. Since 1842 or '43.
- Q. How long have you known Mr. Day?
 A. Since 1843 or '44?
- Q. And Mr. Chaffee?
 A. I should think since 1844 or '45 I have seen him.
- Q. When were you admitted to the bar?
 A. I think in 1837 or '38.
- Q. (Holding Witness a paper, being an agreement between Mr. Goodyear and Messrs. Judson & Staples, dated July 1, 1848.) Is that your signature?
 A. That is my signature.
- Q. After the date of that paper (July 1, 1848,) did you practise your profession as a lawyer?
 A. I did not.
- Q. To what did you then give your attention?
 A. Almost exclusively, or exclusively I may say, to the India rubber patents and business of Goodyear.
- Q. You transacted the law business also connected with it,—acted as attorney, solicitor, and counsel in reference to the Goodyear interest?
 A. I did.
- Q. At that time what was the extent of your interest in the Goodyear patents and patent rights?
 A. One eighth part of all the proceeds.
- Q. Have you parted with that interest?
 A. I have not; my interest still remains.
- Q. Have you parted with any interest in the Goodyear patents and patent rights which you had at that time?
 A. I have not. I might state that I was also otherwise interested than in one eighth part of the proceeds of Goodyear's patents.
- Q. Were you a licensee?
 A. I was a licensee in addition to those others; I was also one half interested in the suspender right which Mr. Day purchased from Goodyear.
- Q. At what date were you a licensee of Goodyear first?
 A. In 1849.
- Q. At what date did you first see the original parchment of the Chaffee letters patent?
 A. I think I received the original letters patent, with other patent papers from Mr. Goodyear as early as 1844. I have a distinct recollection of having this original patent in my possession in the year 1848.
- Q. When was the subject of extending the Chaffee patent first mooted as between Goodyear, Staples, yourself, and the Goodyear licensees? About what date?
 A. The expediency of making application for the extension of the Chaffee patent was a subject of consideration as early as the year 1849; it was a matter of consultation between myself, and Mr. Sherman, Mr. Hutchinson, one of the associates, Mr. Staples, and Mr. Goodyear.
- Q. Mr. Hutchinson was conferred with in what capacity?
 A. As one of the associates and licensees—the four associates. He was more of the time in the city of New York than any other of the associates, and therefore had more to do with it than any of the others.
- Q. What was the immediate point of conference about extending that patent, in reference to the expediency?

A. One question that was discussed was its——

(Objected to.)

Q. I will ask you what was the conclusion?

A. The conclusion was, I advised Mr. Goodyear to make an arrangement with Mr. Chaffee in regard to the extension, purchasing Chaffee's right to the extension; and I was informed by Mr. Goodyear shortly afterwards——

(Objected to.)

Q. Never mind that part.

A. I then went on, after having requested Mr. Goodyear to make that arrangement, and made the application, having understood that——

Q. Never mind the understanding. When did you first see the agreement of the 28d of May, 1850, between Goodyear and Chaffee?

A. I never saw that paper, I think, till it was put in in evidence, and I was shown a copy of it at New Haven, in the hearing of a motion in the cause there.

Q. That was since the 1st of July, 1853, the time of the transfer from Mr. Chaffee to Mr. Day?

A. Yes, sir.

Q. Do you remember what month in 1853 that was that it was produced in New Haven?

A. I do not distinctly now.

Q. It was in October before that you never had seen that agreement, where was it?

A. I either saw this copy on the other side, or Goodyear had sent there the original; which occurred first I cannot distinctly recollect.

Q. The original application for the extension, signed by Chaffee, on the files of the patent office, in whose handwriting is that?

A. I am informed that it is in my handwriting; I have a recollection——

Q. We have got it here. (The Clerk goes out to bring it.) Who took the principal charge and management of that extension proceeding?

A. I had almost the entire charge of it, I believe.

Q. For whom did you act, and in what capacity?

A. I acted for Mr. Goodyear and his licensees and myself, as a party interested. I acted, as I had acted in all the other matters of Mr. Goodyear, as his attorney and counsel and that of the licensees.

Q. Were you employed to conduct that proceeding, or any part of it, by Mr. Chaffee as his lawyer, as attorney and counsel, or in any other professional capacity?

A. I was not.

Q. Did you ostensibly act as his attorney or counsel in that proceeding?

A. I suppose I may be said to have been nominally counsel of Chaffee; I acted nominally as his counsel, but actually for Mr. Goodyear and the licensees and myself, Mr. Chaffee having some interest in the extension, but the property was to be Mr. Goodyear's and his licensees.

Mr. RICHARDSON. The Court will understand that this testimony is objected to in the same way as the other testimony to the same point.

Q. Here is the original application (handing him a paper), you can state if that is your handwriting?

A. That is my handwriting.

Q. What assistance did Mr. Chaffee render in procuring that extension generally?

A. Mr. Chaffee attended on the examinations in New York, and also went to Washington. He was in Washington about a week; he was in New York, I should think, about two. He gave his testimony as a witness.

Q. Was he paid for his services; if so, by whom and out of what fund?

A. He was paid by my direction out of the fund of which I was trustee, made up of the contributions of the licensees of Mr. Goodyear and of Mr. Goodyear himself; he was paid for his attendance as a witness by my direction in that proceeding.

Q. Was he paid by the day or in gross?

A. According to my best recollection he was allowed \$7 a day for his attendance during the time he was in New York, giving his testimony and attending to the business.

Q. Was Chaffee assisted by any other person in this matter?—was George Woodman in any way connected with the extension?

A. I employed Mr. Woodman to go to Washington; he was a witness on the extension in Boston.

Q. At the time of the extension, Aug. 31, 1850, where were the original letters patent of Mr. Chaffee?

A. At the time of the extension they were in the possession of the commissioner of patents. They had been sent on to him by me.

Q. What other counsel assisted in that extension proceeding in behalf of Goodyear and his licensees?

A. Mr. Keller and Mr. Staples.

Q. Since you became connected with the Goodyear patent interests, up to July 1st, 1853, the date of the transfer to Mr. Day, was any suit brought against any person on the Chaffee patent or extension, by Mr. Goodyear and his licensees, through yourself or Mr. Staples?

A. No suit for infringement against any body has been brought since the extension, up to the time of the sale to Day; and no suit on the original patent except against Mr. Day. There was a suit against Mr. Day in which there were three counts in the declaration, and on one of them the Chaffee patent was counted.

Q. That was a suit in New Jersey—an action at law on the Goodyear patent, and on the Chaffee patent?

A. Yes, sir.

Q. What Goodyear patent?

A. I beg pardon—I said three counts; perhaps there were not but two; it was upon the re-issued patent of 1849 for vulcanizing rubber. I think the Hayward patent was not included.

Q. At all events, that was the great subject?

A. That was the great subject. This patent of Chaffee was added in the declaration, but no testimony was taken by us, at all events, on that.

Q. That has never been tried?

A. Never been tried.

Q. A plea was put in?

A. A plea, and notice given by Mr. Day of defence.

Q. Is this the notice of special matter served in that suit in behalf of the defence—the copy received by you at your office (handing him a paper)?

A. This is the copy received by me.

Mr. BRADY. By the practice in New Jersey, the notices are filed and copies served.

Q. Look at this paper (handing him the counterpart of the agreement of the 5th of September, 1850,) is that your handwriting?

Mr. RICHARDSON. We object to that question. They must produce the original paper and call the subscribing witness.

Question argued; objection sustained; exception taken.

Q. I ask you to look at this paper (the defendant's part of the agreement of September 5, 1850,) and tell us what date you first saw that paper?

Mr. RICHARDSON. I object; the paper is not in the case yet.

Mr. BRADY said that he wished to prove that this portion which has become detached, was a part of the original paper at its execution, and that this seal was on it.

The COURT. That is a part of the execution, and is subject to the same objection.

Q. By whom were the expenses of obtaining the extension paid primarily?

(Objected to as immaterial, until better evidence is put in, and as evidence which will be inadmissible when the paper of September 5, 1850, is put in. Objection sustained.)

Q. What was Chaffee's business in the year 1850, prior to the 5th of September?

A. From the early part of 1850, onwards, he was in the employment of Mr. Goodyear.

Q. Had he any other occupation or employment?

A. None that I know of.

Q. (By the Court). You spoke of 1850; did you mean all the year?

A. Up to the time of the extension he was in Mr. Goodyear's employment, and afterwards.

Q. Here is the agreement between the shoe associates and Messrs. Hartshorn & Hayward, of the 1st of February, 1851, which has been put in; in whose handwriting is that paper—the body of it?

A. In the handwriting of my clerk, Abm. B. Thompson, at that time my clerk.

Q. From what was that copy made?

A. It appears to have been made —

Mr. RICHARDSON. We raise no question; we admit it.

MR. BRADY. I am going to prove the draft.

WITNESS. This draft is by Mr. Thompson, as amended by me; my writing was on the margin of the draft from which the original paper was made.

Q. You therefore knew of the execution of that agreement at the time?

A. I did.

Q. Did you know before the date of that paper (Feb. 1, 1851,) the business of Hartshorn & Hayward?

A. I did; they were carrying on business at Providence, manufacturing vulcanized rubber shoes.

Q. Was that known to all the licensees of Goodyear, and to Goodyear as well as yourself?

A. It was.

Q. Did you know with what machinery and process they were carrying on that business?

A. I never saw Dr. Hartshorn's factory but from his examination on the extension.

Q. You were not in his factory?

A. No, sir.

Mr. BRADY. Under the intimation of the Court I will reserve, until the paper of the 5th of September is proved, every thing relating to the point of the payment of the expenses, and reserve my right to examine Mr. Judson.

The Court. I do not exclude it.

Mr. RICHARDSON. Then we will waive the cross-examination for the present.

GEORGE WOODMAN SWORN AND EXAMINED BY
MR. BRADY.

- Q. Where do you reside?
A. In Boston.
Q. What is your occupation?
A. I have no particular occupation at the present time.
Q. Have you any occupation?
A. I have; at times I act for some of the insurance offices in cancelling losses, &c.
Q. What was your occupation in 1850, in August or September?
A. I was one of the public store keepers in the custom house at Boston.
Q. Did you know Mr. Chaffee at that time?
A. Yes, sir.
Q. How long had you known him?
A. All of twenty years.
Q. You knew him then about 1830?
A. About that time or 1832; it was not far from twenty years.
Q. You were intimate with him?
A. I was intimate with him from 1833 to the present time; there was an interval in which I did not see him often.
Q. Did you know Mr. Goodyear?
A. Very imperfectly; I never saw him but once or twice in my life.
Q. When did you first see him?
A. The first time I ever saw him to remember him I think was at Mr. Chaffee's house, on the 5th of September, 1850, when the paper was executed.
Q. That was the first time?
A. To my best recollection, that is the first time I ever saw him to know him.
Q. Have you ever seen him since?
A. I think I saw him the next day. I do not think I have ever seen him since to know him.
Q. When did you become acquainted with Mr. Judson?
A. Not far from the middle of August, 1850.
Q. After the commencement of the suit of Horace H. Day against Harts-horn & Co., and the commencement of the suit of Mr. Day against L. Candee & Co. in New Haven, did you make affidavits in the case to be read on the part of the plaintiff on the motion for an injunction?
A. I do not exactly remember the case; I remember making one or two affidavits on behalf of the plaintiff.
Q. The plaintiff, Mr. Day?
A. Yes, sir; I think it was Mr. Day.
Q. At whose suggestion?
(Objected to as improper on a direct examination; objection sustained.)
Q. You were examined in the city of New York in the suit of Horace H. Day against the New England Car Spring Company?
A. I was, very thoroughly, I thought.
Q. Are you on friendly terms with Mr. Judson?
(Objected to as improper.)
WITNESS. I had just as lief answer that question.
(Objection sustained.)
Q. Is that your writing? (pointing to his subscription to the counterpart of the paper of the 5th of September, 1850.)
A. It is.
Q. You are sure?
A. I am very sure it is.
Q. Whose writing is that? (pointing to the signature of Wm. Judson on the same paper.)

A. Wm. Judson's.

Q. Do you know that it is his writing?

A. I saw him do it.

Q. You saw him write it?

A. I did, if that is the paper, and I suppose it is.

Q. If that is the paper?

A. Yes, sir; I have seen this paper before, and it is the same unless it has been altered.

Q. Look at it and see if it has been altered.

A. I do not know as I can tell.

Q. Look at it and see.

A. (Reads it.) I have no doubt of it.

Q. You don't see any alteration in it?

A. Not that I can remember; I do not think there is any alteration.

Q. Are you quite certain?

A. Well, I do not know that there is; there may have been alterations made, but nothing that I can detect.

Q. Well, this is the paper that has been produced from the possession of the plaintiff?

A. I do not know any thing about that.

Q. You don't know whether it has been altered or not? you will not be positive about this paper?

A. No, sir.

Q. Look at the indorsement on it; whose is that?

A. That is mine.

Mr. RICHARDSON, (to witness,) Read it to yourself.

Mr. BRADY. I will read it. "Agreement between Wm. Judson *et al.* Wm. Chaffee, patent, I. R. Machine."

Q. What does "*et al.*" mean?

A. I can tell what I understand it to be.

Q. Well, sir?

A. "And others."

Q. It is an abbreviation of two Latin words?

A. I don't know any thing about Latin; it is a common phrase, and I put it on.

Q. When was that paper signed?

A. On the 5th day of September, 1850, some time in the evening.

Q. There are certain alterations on the face of this paper. The pen appears to have been drawn over the words "semi-annually," and the word "quarterly" has been substituted?

A. That is so.

Q. Whose writing is that?

A. That is mine.

Q. Then the pen has been drawn over the words "six hundred," and the words "three hundred" have been substituted; whose is that?

A. That is mine.

Q. Then the word "December" has been put in before the word "March," whose is that?

A. That is mine.

Q. And the word "June" before "and?"

A. That does not look so much like my handwriting.

Q. What do you think about it?

A. I think it is mine.

Q. Have you any doubt about it?

A. No, I don't think I have.

Q. The words "for my own purposes" seem to have been written there, and the pen drawn through that; was that there before it was signed?

A. I think it was.

Q. Have you any recollection about it?

A. Not very distinct.

Mr. BRADY here proposed to read the paper.

Mr. RICHARDSON objected, as it was not the original paper signed by Mr. Chaffee.

The COURT ruled that this paper might be read, though it would be somewhat informal, as both of the papers make one contract, and unless the other was put in, this would not amount to much.

Mr. BRADY then read the paper of the 5th of September, signed by Mr. Judson.

Q. Is that your writing? (pointing to his subscription to the other paper.)

A. Yes, sir.

Q. That "witness, George Woodman," is in your hand-writing?

A. It is.

Q. Whose writing is that—E. M. Chaffee?

A. It is the signature of Mr. Edwin M. Chaffee.

Q. Look at the word "quarterly," in that paper, and say whose writing that is.

A. I really do not know; it is not mine.

Q. That word quarterly is not yours?

A. I think not.

Q. Is that word "three" yours?

A. No, sir.

Q. Is that word "December" yours?

A. No, sir, I should think not; it does not look like it.

Q. That word "June"?

A. No, sir, I think that is not mine.

Q. The words "present or any further"?

A. No, sir.

Q. "My executors, administrators, or assigns?"

A. I do not think any of it is.

Q. You do not think either of the interlineations are in your writing?

A. I do not.

Q. In whose hand-writing is this? "and it is expressly understood and agreed that I am to have the right to use said patent and improvement in any business which I may carry on: as witness my hand and seal this 5th of September, 1850?"

A. It looks very much like my hand-writing. Some parts do not. I write more than one hand; sometimes I write back-handed and sometimes flowing or running hand. This is not my natural hand. It looks like my style. There are some words and letters which do not look like mine.

Q. Do you believe it to be your hand-writing?

A. It looks like it.

Q. Have you any doubt that it is all your hand-writing?

A. I have some doubt; but really it looks so much like it, I should think it was all mine.

Q. It was all written there before Chaffee signed the paper?

A. Yes, sir; no mistake about that.

Q. Do you remember those interlineations being made in this paper at the time, before it was executed?

A. I suppose they were made at the time when we compared the two papers. One read, and I believe I examined or read the paper. I believe I made the alterations to correspond with the other paper.

Q. Now, sir, did you see Mr. Chaffee sign his name opposite the seal on this paper?

A. I cannot say that I saw him sign it opposite the seal. I saw him sign his name there. My opinion—

Q. What were you going to add?

A. My opinion is, the seal was not there.

Q. That is your opinion?

A. That is my best knowledge and belief.

Q. Have you any recollection on the subject at all?

A. Yes, sir, I have some recollection—I have some reasons for my belief.

- Q. I ask your recollections.
 A. Well, sir, my recollections—
 Q. Have you any recollections as to whether that seal was on the paper at the time you saw it signed?
 A. My recollections are that it was not.
 Q. Do you state to the jury that it was not?
 A. I said that according to my best knowledge and belief it was not.
 Q. That will not do.
 A. I cannot go any further.
 Q. Can you state that that seal was not on that paper when Mr. Chaffee put his name to it?
 A. I cannot answer in any other way. It will be no use for me to say I do not know.
 Q. (By the Court.) We want to know what you distinctly recollect?
 A. I say to my best knowledge and belief.
 Q. Not your knowledge and belief?
 A. According to my recollection.
 Q. (By the Court.) Do you recollect?
 A. No, sir; I do not.
 Q. You were examined on this subject in New York?
 A. I was.
 Q. Do you remember that you were asked there whether Mr. Chaffee signed and sealed that paper in your presence?
 A. I remember it; the counsel did not ask it in that way.
 Mr. RICHARDSON objected to this mode of interrogation. The witness was the defendant's witness, and they should not put any question to him tending to contradict him.
 Mr. BRADY contended that he was not the defendant's witness, but the witness of the law. He would, however, reserve any further examination until he was examined by the other side, in relation to the execution of the paper.

Cross-examined, by Mr. Richardson.

- Q. Were these two papers both executed or both signed at the same time by Mr. Judson and Mr. Chaffee?
 A. Yes, sir; the same evening, within a few minutes of each other I think.
 Q. The one signed by Mr. Judson purports to be under seal; is there any seal upon it now?
 A. There is not.
 Q. The one signed by Mr. Chaffee has a seal upon it?
 A. It has.
 Q. They purport to be copies of each other. You say you compared them?
 A. I compared them at that time, and I believe I read them in the court, at New York.
 Q. And you made interlineations to make them exactly correspond. Now have you any recollection in relation to whether there was a seal on that paper signed by Mr. Chaffee, at the time it was executed and delivered?
 A. I have no recollection.
 Q. Have you any recollection upon the subject whether there was or not?
 A. I answered that by saying that my best recollection was there was not.
 Q. What enables you to recollect anything about it?
 A. These papers were made under an agreement between Mr. Chaffee and Mr. Judson, wherein Mr. Chaffee was to receive instead of \$1,200.
 Q. Now I will ask you if you gave your affidavit in one or two injunction cases, and whether—
 Mr. BRADY objected, as this cross-examination was now merely upon the execution of the papers.
 Mr. RICHARDSON. I mean to come directly to the point as to whether the witness does or does not know of the execution.
 The Court. I think the question should be put to him without reading an affidavit to him.

Q. Have you any recollection upon the subject at all whether that seal was there or not? any present recollection?

A. My present recollection is that it was not.

Mr. RICHARDSON. What I propose to prove is that this witness having been asked, on the stand in New York, whether he saw it executed, answered generally, that he did, but directly afterwards he remembered that there was no seal upon the paper, and caused himself to be recalled, and made the correction.

Mr. BRADY objected, as the witness had already answered the question conclusively.

The COURT admitted the proposed questioning, not to contradict but to fortify the witness's previous testimony.

Q. When did you first see that paper after its execution?

A. I do not recollect of seeing it until I saw it in court in June last, I think.

Q. You say from your recollection now there was no seal upon it; will you state what recollection you have about that seal, if you have any?

A. My recollection is that this was an imperfect paper; it was not considered to be a final thing, but was incomplete, inasmuch as some—

Q. Speak now your recollection about the seal?

A. If I am compelled to come right to the point, I should say there was no seal on the paper. I think I should be nearer the truth in that than in any other statement. I have certain reasons for it.

Q. Have you any recollection on that subject?

A. Yes, sir; I have certain reasons which I can—

Objected to by Mr. BRADY.

The COURT considered it improper for the witness to state his reasons.

Mr. RICHARDSON said he not only proposed to get at what made the witness remember, but to go further and show that the seal was put on since.

The COURT. I will allow him to state why he does recollect.

WITNESS. Because the papers were not completed; they were left in an incomplete state; they were imperfect papers.

Q. What first called your attention to show whether there was a seal on the paper or not?

A. When I was examined by Mr. O'Connor, the question was put to me whether that was exactly such a paper as I saw signed. I stated to him that there might have been additions. There was something in my mind that I could not at that moment recollect. He asked me if that was the same paper, and I answered "It is; there may have been additions to it." At that time I could not recollect, afterwards I did recollect, and my recollection was that the seal was not there. That was the whole trouble. I went into court, and so rectified my statement.

Q. Do you recollect now that there was any difference between the two papers at the time they were executed?

A. I do not.

Q. Was there any thing said about their being exactly alike?

A. Yes, sir; they were to be exactly alike.

Direct resumed by Mr. Brady.

Q. If they were intended to be exactly alike, why were they not made so?

A. I do not know.

Q. You wrote the words there, "As witness my seal this 5th Sept., 1850?"

A. I did. I copied it from the other paper in order to make the papers alike.

Q. Have you any memory as to whether any seal was put on the paper of the 5th of Sept. or not?

A. I have no recollection that it was put on.

Q. And you say the reason you recollect it is that the papers were not complete?

A. Yes.

Q. Is that the only reason?

A. I went on just now to explain and was stopped.

Q. We permit you to go on.

A. The bargain between Judson and Chaffee was for \$1,500 instead of \$1,200. Mr. Judson filled them up with \$1,200; then Chaffee refused to sign the papers; but Mr. Judson promised to have these papers immediately re-written, holding these for a memorandum of an agreement, the blanks to be filled with \$1,500, according to the agreement, and the other quarterly payments to correspond. That led me to—

Mr. BRADY. Your Honor will consider, that though this is received, we reserve objections to that as incompetent to be given at this time, being in reference to the construction of the papers.

Q. Have you now stated all the reasons to the jury why you think you recollect that the seal was not there on the 5th of September?

A. That was the principal one. The other one was, that as the papers were both to be written alike. That was another very important consideration.

Q. Is this, then, your explanation, that the reason why you recollect that the seal was not put on that paper is, in the first place, the papers were to be both alike (one of them seems not to have a seal on it); and in the second place, that Chaffee was to be paid \$1500 a year instead of \$1200?

A. Yes, sir; that was distinctly understood.

Q. Can you explain to us how that last fact—that Chaffee was to have \$1500 instead of \$1200—was to affect the other question whether there was to be a seal?

A. Because the papers were left incomplete.

Q. Was the paper incomplete when Chaffee had signed it, and you witnessed it?

A. I should think it was, since it was without a seal.

Q. Was it intended at that time to leave it incomplete?

A. Yes, sir; it was intended that the papers should be re-written. The agreement between Chaffee and Judson was not inserted in these papers, and Chaffee refused to sign them.

Q. Wait; we will come to that presently. I want to ask you now if Mr. O'Connor asked you this question, in these words, in regard to that paper? "Did you see it signed and sealed at that same time by Mr. Chaffee?"

A. I believe he did—no, sir, not in that way. He was very cautious about putting it to me. He first asked if I saw it signed by Mr. Chaffee. I answered that I did. Then, after going off for some little time, he came to that question again, and asked me if I saw the seal put there. There was something in my mind that I did not fully recollect, and I think I answered that I thought it was there.

Q. Did Mr. O'Connor ask you this question either in words or in meaning? "Did you see that signed and sealed at that same time by Mr. Chaffee?"

A. He did not ask me in that way. He asked me in the first place if I saw it signed; and very cautiously, if I saw the seal on it.

Q. What did you answer?

A. I believe I answered that I thought it must be.

Q. Didn't you answer in this way? "I think I was specially called for the purpose of witnessing it; yes, sir, I think I did, I think I was specially called upon by Mr. Judson to witness it there on the spot."

A. Yes, sir, I believe I answered so.

Q. And did you answer that there was, or that you thought there was, a seal on it at that time?

A. Yes, sir, I think I did.

Q. Do you remember that after you had so stated, an objection was made to giving any proof of fraud in obtaining that paper, on the ground that it was sealed?

A. I think I heard such a thing mentioned in court.

Q. Yes, sir, and you heard it argued?

A. Yes, sir, I think I did.

Q. Now, sir, wasn't it after that discussion—after the lawyers had argued

more than a day the question whether fraud could be proved, to set aside sealed instrument, that you first suggested any doubt in your mind as to the being a seal on that paper?

A. No, sir; it was but a very short time when it came to my mind about that seal. I had very strong doubts when I testified, and when I went out court and walked up Broadway, it came to my mind like a flash, and I went back and asked if I could alter my testimony.

Q. When you had closed your testimony on the direct, and Mr. O'Connell examined you, hadn't you left the matter in such a stage that you had shown that there was a seal on the paper?

A. I believe I didn't state so distinctly; I said I thought there was or there.

Q. That was on Tuesday?

A. I do not know.

Q. That was the day you were examined. When were you called back—wasn't it on the Friday following?

A. I do not know.

Q. Wasn't it two or three days after?

A. I don't know whether it was two days or one. We kept adjourning over and over again; it was a forty-five days job.

Q. When you did come back, was not this what you said? "After I left the court-house I had doubts whether the seal was there, and I have doubt now. I said I had doubts whether I could swear that the seal was there; I could not swear it was not there." Is that your testimony?

A. I think probably it was; you can tell; you have a record of it.

Q. You said then that you could not swear that it was there?

A. I said that according to the best of my knowledge and belief.

Q. Did you swear to that?

A. I think I did very emphatically.

Q. Do you remember that you said also in substance, "I have one or two reasons that lead me to believe it was so?"

A. Distinctly.

Q. And then that the only reason you assigned was this: "I supposed at the time they were the same; I have no recollection that they were different they were intended to be alike."

A. I think those are the precise words.

Q. These two papers prove to be alike; one of them has your interlineations in it; were they both read over before they were signed?

A. I think so.

Q. They were compared?

A. I think so.

Q. That is, you held one and Judson the other?

A. Some gentleman did.

Q. One read and the other looked on to see that they agreed in all respects?

A. What brings that to my recollection is, that I interlined one of them. I have no doubt in my mind it was so.

Q. What became of the paper that Chaffee signed?

A. Mr. Judson took it.

Q. And the one that Judson signed?

A. I think Chaffee took it away.

Q. What became of it afterwards?

A. The next day Mr. Chaffee handed it to me, and requested me to keep it until he called for it.

Q. When did he call for it?

A. It was some few days after—not a great while. He wrote to me for it and I sent it to him, I think, inclosed in a letter.

Q. After that it was in his possession?

A. Yes, sir.

Q. You wrote a letter, and Chaffee wrote a letter to you; have you got it?

A. I have not.

Q. What has become of it?—Is it destroyed?

A. I do not know.

Q. Do you know any thing about it?

A. I do not; I have a large number at home, and it may be among them.

Q. Have you seen it?

A. I have not seen it.

Q. Do you know whether it is there or not?

A. I do not.

Q. Did you receive more than one letter from Chaffee about it?

A. I do not recollect that I did.

Mr. RICHARDSON. I take it that they cannot put in this paper, as the subscribing witness has not sworn to it conclusively.

The COURT. The witness said in the first place that he didn't distinctly recollect, and afterwards he said he did recollect. I leave it to the jury to decide whether it is proved that the seal was on or not.

Re-cross-examined by Mr. Richardson.

Q. You say that you have no particular business; where were you residing on the 5th of September, 1850?

A. At Boston.

Q. How happened you to be in New Haven at the time you saw this paper subscribed?

A. I left Boston not far from the 20th of August, to go to Washington, at the request of Judson.

Q. Mr. Judson applied to you for that purpose?

A. He did.

Q. What did he tell you he wanted of you?

A. He wanted me to assist in the extension of what is termed the Chaffee patent.

Q. Did he tell you whom he was acting for?

A. He did.

Q. State the circumstances that took place?

A. I was sent for to give my deposition in this case, and in the course of that deposition—I do not know but what it may have been thorough—Mr. Judson said to me that I must go to Washington. I told him I was in the custom-house, and probably could not go very well.

Mr. BRADY here raised the point that no proof was admissible in reference to fraud, because the instrument was under seal, and because the execution of the paper of the 12th of November, 1851, estops Mr. Chaffee and all others from alleging fraud.

Mr. RICHARDSON referred the court to the decision of Judge Betts on that point.

The COURT. I have read that decision; I admit the evidence, of course.

Q. State the circumstances that took place when you were called upon by Mr. Judson to give your affidavit?

A. I was called by some one to go to the office on the corner of Court Square and Court St., to give a deposition in favor of the extension of this Chaffee patent. I do not recollect distinctly whether it was in the course of that examination or after its close that Judson wished me to go to Washington.

Q. What did he say to you?

A. I told him I was so situated that I didn't see how I could go. I didn't know the parties any other than Mr. Chaffee; but as Chaffee was an old friend of mine, a mechanic, if it was necessary to go for his benefit I would try to go. Mr. Judson then said to me that he was acting for Mr. Chaffee as his counsel, and that it was for the benefit of Mr. Chaffee, and that if I would go he would pay me liberally for going. With that assurance I went to the custom-house and got a permit from the collector, and in due time went to Washington, according to the agreement with Mr. Judson at the time. I was to meet Mr. Judson and Mr. Chaffee at New York, I think it was on the Friday following.

I proceeded to New York, and there found that they had proceeded on to Washington. I then immediately followed on to Washington, arriving there on Sunday morning; I found Chaffee and Judson there.

Q. (By Mr. BRADY.) What date was that?

A. It was the last Sunday but one, I think, in August. *last Sunday*

Q. You say you stopped in New York; did you stop any time?

I stopped there no longer than from the morning till the proper conveyance, and went on.

Q. Did any one go on with you, connected with this matter?

A. I believe not.

Q. Were there any other parties at Washington except Judson and Chaffee, acting for the extension on what is called Chaffee's side, that you know of?

A. I believe not; I saw nobody but Judson and Chaffee at that time.

Q. You went on to help and in procuring it?

A. Yes, sir.

Q. There was nobody on your side but Judson and Chaffee that you know of?

A. They were all I saw that I know of.

Q. Were you present when any thing took place between Chaffee and Judson at Washington in relation to the extension?

A. We were consulting together at various times, from Sunday morning till the following Friday. We consulted on various things, and I was sent in divers ways to do certain things in aid of the object.

Q. The consultations were in reference to the success of the measure?

A. Altogether.

Q. Did Chaffee advise Judson about it?

A. Always—several times—a great many times in the course of the week—sometimes several times a day.

Q. How long did you remain there?

A. I remained there from Sunday morning till the next Saturday afternoon—I think, 5 o'clock.

Q. Who returned with you?

A. Mr. Chaffee started, I think, at 5 o'clock, either on the last Saturday or—

Q. When did Judson return?

A. I do not know.

Q. Did Judson return with you?

A. He did not.

Q. When did you next see Judson?

A. I think it was the Monday following, in New York, or on Tuesday—I cannot recollect exactly.

Q. Did you stop over at Philadelphia, you and Chaffee, on your way home?

A. Yes, sir; I think we stopped from about midnight, on Sunday morning, till Sunday evening, when we took the Sunday evening train for New York; we arrived in New York at 12 o'clock on Sunday night—the last Sunday in August.

Q. How long did you stay in New York—or did you stop there at all?

A. I stopped there some two or three days.

Q. Did you bring on the original patent with you when you came on to New York, or did Chaffee or Judson?

A. It was either Chaffee or I; I think it was Chaffee. I do not know but I might have brought it on myself.

Q. It came on between you?

A. Yes, sir.

Q. Did you see it after you arrived in New York?

A. I do not know that I did.

Q. Did you see it on the way from Washington to New York?

A. I think I did.

Q. Now, sir, when you got to New York, did Chaffee come to you and tell you any thing that Judson had said to him?

A. Yes, sir, he did, on Tuesday morning, I think.

Q. Will you state what he said that Judson had said to him?

Objected to.

Mr. RICHARDSON said he intended to prove that what Chaffee said to Wood-

man, Mr. Woodman repeated to Judson.

Objection overruled.

Q. Did Chaffee tell you any thing that Judson said to him?

A. He did.

Q. Did he request you to go to Judson about it?

A. I think I went at my own suggestion.

Q. Now state what you said to Judson, if any thing, in consequence of what Chaffee said to you?

A. I stated to Mr. Judson that I had understood from Chaffee that he had undertaken to obtain the patent from him by very unfair means. I stated to him that I understood that he had invited him up to Mr. Staples' house, and he told him that he (Judson) had advanced large sums of money to obtain extension of this patent, and that he must have security in some way from Chaffee by this patent, to secure him for that large outlay. I stated to Judson that he had said to Chaffee that he (Chaffee) was holden for that large amount outlay; that it was a very large sum; that unless Mr. Chaffee made him secure in that patent, he would break him up in his business, and would ruin him if possible. I do not know that that is the exact language, but that he would break him up in his business. I told him that he had frightened him out of his wits, and I believed Chaffee had cleared out and gone home. Mr. Judson then entered into conversation, and affirmed very nearly the whole.

Q. Mr. BRADY. What did he say?

A. He said that he had laid out large sums of money for Chaffee, and Chaffee was holden for these sums of money; that he was a great fool not to give up the patent; that he was now in comfortable circumstances, and unless he did it he could break him up in his business, and would break him up in his business; that Mr. Goodyear had advanced nothing towards the extension of the patent; that he was poor and could not, and if the patent went into the hands of Goodyear, he (Judson) never should get any thing for the large outlay he had made; and that unless he had a lien from Chaffee he should lose this large outlay of money. That is as near as I can remember; that is the substance of the conversation.

Q. Did you ask Mr. Judson how much the expenses had been?

A. I did; I asked Judson how much he had laid out, and he said that the expenses had not been made up and he could not tell: but that it was a very large sum.

Q. State whether Judson said any thing about an agreement that Chaffee had made with Goodyear?

A. I understood him to say that there had been an agreement with Goodyear, but that Goodyear should not have that patent because he had paid nothing towards the extension, was so poor that he could not, and unless he had a lien on that patent to secure him for the outlay he should probably lose it. Nothing to that effect; that is the substance. I cannot give every word just as it was stated at the time, it being several years ago.

Q. What did you say to Judson in reply, if any thing?

A. I think I told Judson that it was a very great pity, after we had succeeded so well in extending that patent, that any difficulty should happen that we could not carry out the business. He agreed with me, and we went then to talking about how we could best settle the difficulty, and I think I made some proposals. I think I stated to Judson that I thought the sum they were to pay it was small, and if they would give Chaffee more, and compensate him, perhaps he would be induced to pass the patent to him or settle with him. Mr. Judson rather agreed with me on the point, and it was decided that I should go to New Haven and see what could be done in the premises with Chaffee. I went to New Haven and met Chaffee, and talked the subject matter over with him. I told him that they would make a more liberal allowance than what was agreed in the paper by Goodyear. Chaffee seemed to think that his

course was to carry the original bargain out with Goodyear, and he resisted for a long while. Judson came to New Haven and we met, and the result, after a long while was, this paper of the 5th of September. We came to that conclusion. It was a long story to tell—a great many words said—a very difficult thing to settle.

Q. Where did you first see Judson, in New Haven?

A. I do not recollect.

Q. Did you come up alone, or with Chaffee?

A. I do not remember. I remember going up with Chaffee to the hotel to see if Judson was there, but whether we called there I do not recollect. We did meet in New Haven, and after a long conversation at his house and elsewhere, we hit upon this paper of the 5th of September. There was some considerable argument, and the papers were drawn up and fixed as far as they are.

Q. When Judson came to meet you and Chaffee together at New Haven, was there any conversation about the inducements to make this paper on the part of Judson? Any thing said about it?

A. There was a great deal said; a great deal of what I have repeated.

Q. Was this conversation repeated over to Chaffee?

Mr. BRADY. No, no; what he said.

A. I have stated that; some of the former words were repeated.

Q. Tell what was said?

A. It is almost impossible to tell every thing that was said.

Q. Tell what you recollect?

A. Mr. Judson asked the transfer of that paper (whatever it was) to him to give his security, and repeated some conversation about his being liable for it; that it was his duty to give him that security; and, in fact, he urged it with a great deal of energy. I know that Chaffee's great objection was—upon which he resisted to the last,—that he was in duty bound to carry out the bargain between him and Goodyear.

Q. Was Goodyear present?

A. He was not. Mr. Judson stated at that time that it would be all right if Chaffee gave him the papers instead of Goodyear; and I think that in the evening, when Chaffee agreed to the proposition, Mr. Candee was there; and I think I put the question to Mr. Candee if it would be right—

Q. I am not asking you about that conversation with Mr. Candee.

Mr. BRADY. Let him state it.

Mr. RICHARDSON. You can state it.

A. I think I put the question to Mr. Candee if it would be proper, and right, and honest, to convey the paper to Judson, and he thought it would be right, that Chaffee would not commit any very dishonorable transaction; and I believe that had as much effect upon Chaffee as any one thing.

Q. Did Mr. Goodyear come while the transaction was going on or after the papers were made?

A. I think he came after the papers were made or in progress,—when they were signed; he came late in the evening.

Q. What was done when Goodyear came in?

A. The papers were very unceremoniously hustled out of the way—taken out of sight,—so that Goodyear should not see them.

Q. How long did Goodyear stay there?

A. I cannot say; perhaps an hour or so; it was rather late when he came.

Q. You have been asked if you took possession of this part that belonged to Chaffee, how happened you to take that paper the next day?

A. As I was about starting to go to Boston, Judson and Chaffee were at the cars to see me off. At the suggestion of Judson, Chaffee gave me this paper to carry to Boston, and gave as a reason, that if any body asked him if he had any papers, he could say he hadn't any in his possession. I think that was the statement; I am very sure it was.

Q. Repeat that again?

A. At the suggestion of Judson, Chaffee handed me the paper to be kept,

giving as a reason that if anybody asked Chaffee for the paper he could say he had no papers in his possession.

Q. Mr. Judson said that?

A. Yes, sir.

A. Who examined you when you were witness at Boston, as counsel for Chaffee, in this extension proceeding?

A. I forget who put the interrogatories there; I remember Judson was there, and was very active. I was not acquainted with the Commissioner, or the gentlemen acting on the other side, but I believe it was Judson; I am not positive.

Adjourned.

THIRTEENTH DAY.**TESTIMONY OF WOODMAN, CANDEE, AND JUDSON.**PROVIDENCE, *Thurs., Feb. 8, 1855.***MR. WOODMAN CONTINUED—CROSS-EXAMINED BY
MR. RICHARDSON.**

Q. At the time you had this conversation with Mr. Judson, which you have related, in New York, did Judson say any thing in relation to his services in procuring this extension?

A. He said he had been at great expense in obtaining depositions, and for his own services and trouble; and that was the reason he gave for wishing to get the patent into his hands—for security.

Q. Did you ask him how much his bill amounted to?

A. I think I asked him how much the expenses were, and he said they were very large; that he had not made it up, and could not tell.

Direct resumed by Mr. Brady.

Q. What services did you render in this extension, for which Mr. Judson employed you?

A. Nothing in particular was pointed out.

Q. What part did you take in the extension?

A. I do not think my services were of great importance at all; I did some errands for them, and some things of no very great consequence.

Q. How much were you paid for your services?

A. \$300.

Q. Who paid you?

A. Mr. Judson paid me; or rather, I think, I got \$100 from a store in Broadway, which I understood was for Mr. Judson. He had agreed to pay \$100, and the last payment of \$200 he gave me, I believe, in the form of a note or draft of 30 or 60 days, which he paid.

Q. The \$100 you got from Broadway you got by his order?

A. I had no order; I went there, and told them I was to have \$100 to bear my expenses, and it was given me by some person.

Q. Do you know Mr. Buckmaster?

A. I do not; I have seen the gentleman.

Q. You saw him at the trial in New York?

A. Yes, sir; a gentleman they called Mr. Buckmaster.

Q. Was that the person who gave you that \$100 at the store in Broadway?

A. Some person who was employed there; I do not know who he was.

Q. You do not know whether he was or was not?

A. I do not know him to be Mr. Buckmaster; I have never been able to recognize him since; in New York was the only time he was pointed out to me.

Q. Did he give you money or a check?

A. I have forgotten.

Q. Did you give a receipt for it?

A. I do not know that I did; probably I did; I do not remember.

Q. How long were you engaged in the extension proceeding, for which you were paid this \$300?

A. Less than a fortnight.

Q. Did you render any other service or assistance except going upon some errands?

A. Nothing of any great importance; I might have been with him when he consulted and had some plans; it was of no great importance; I think myself I was well paid.

Q. Do you remember that when you received that \$100 in Broadway you had a conversation with the person who paid it to you?

A. Yes, sir; I remember of talking with some person there.

Q. What was the date of that payment?

A. I cannot tell; I should think it was between the 20th and 30th of August, 1850.

Q. Was it while you were on your way to Washington?

A. It was.

Q. Did you tell the persons in that store that you were going to Washington?

A. I think probably; I have no recollection that I did.

Q. Do you remember telling that person that you were going to Washington for the Goodyear party to defeat Mr. Day, or any thing of that kind?

Objected to as immaterial; question allowed.

A. I do not remember of saying so; but one thing is certain. I did not say I was going for Goodyear and his licensees, for I never knew there was such a party in the world as Goodyear's licensees until I got back with the patent; I had never heard of them.

Q. We will leave out the word licensees; did you ever say for the Goodyear party, or any thing like it?

A. No, sir; nor any thing like it, that I remember; for I did not know the Goodyear party.

Q. Did you use the name of Goodyear?

A. I do not think I did; I may have spoken of his name, but not in connection with that case. I was led to believe it was for the benefit of Chaffee.

Q. I am asking about what you said, not what you believe?

A. It is impossible to tell.

Q. You undertake to say you did not use Goodyear's name at that time?

A. I did not say so; I said I might have used his name. I had heard of Goodyear.

Q. You will not state any thing positive about it. Have you a distinct recollection as to what time you started for Washington?

A. I think it was Thursday night. And here I wish to correct what I stated yesterday. I stated yesterday that I started from Boston, on Thursday night, and arrived at Washington on the Sunday prior to the last Sunday in August. On looking at the calendar I find I was mistaken. The month closed on Saturday, so that it was on the last Sunday in the month that I arrived at Washington.

Q. That was Sunday, the 25th day of August?

A. I suppose so.

Q. The 31st came on Saturday, and the Sunday before that you arrived in Washington, in the morning?

A. Yes, sir.

Q. Having left there in the train on Saturday afternoon?

A. I do not know whether it was morning or afternoon. I staid in Baltimore over one night, certainly.

Q. And then you quitted Washington on Saturday, the 31st of August, to come on to New York?

A. Yes, sir.

Q. You stopped in Philadelphia on the way, and came through to New York in the train of Sunday?

A. Yes, sir; and arrived in New York some time near midnight.

Q. Did you know Mr. Staples at that time?

A. No, sir.

Q. Had you ever seen him?

A. Not that I know of.

Q. When you returned to New York, you and Chaffee put up at the Florence Hotel?

- A. Yes, sir.
- Q. And when did Mr. Chaffee leave the city and go to N. Haven?
- A. I think it was Tuesday morning or forenoon; I cannot tell; I saw him in the course of the forenoon—what time he left I do not know.
- Q. But he left without giving you any notice?
- A. Yes, sir; he stated, the last time that I went to see Judson, that he should go, and he did go.
- Q. Now, sir, when you had that conversation with Judson, which you have already stated, in which you told him what Chaffee had told you, did you conclude that you would go on and see Chaffee at New Haven?
- A. Yes, sir; after we had some conversation I concluded to go on.
- Q. For what purpose?
- A. I understood it to be to see if we could reconcile the matter and—
- Q. And what?
- A. Bring about what Judson desired.
- Q. Was that agreed upon between Judson and yourself?
- A. Yes, sir: I am very sure that Judson understood it perfectly.
- Q. You said it was to settle the difficulty?
- A. Yes, sir; there was a very serious difficulty, and I was in hopes it might be settled; it was for that as much as any thing.
- Q. The difficulty was, Chaffee was desirous to carry out his bargain with Goodyear?
- A. I understood it so.
- Q. Was that the only difficulty?
- A. The difficulty was, Chaffee was very much grieved at the conduct of Judson at Mr. Staples' house.
- Q. What was the objection stated by Chaffee to executing a transfer or conveyance, or instrument to Judson? Was it not exclusively that he wanted to carry out his bargain with Goodyear?
- A. I so understood it.
- Q. Then when you went to New Haven was it to persuade Chaffee not to carry out his bargain with Goodyear?
- A. Not particularly that; I went to get it fixed with Chaffee, and assist in any way to reconcile these two parties.
- Q. Wasn't it your purpose to get Chaffee to agree to execute a paper to Judson?
- A. I do not think it was altogether that; I went, certainly, with the desire of Judson for that purpose, after hearing what Judson had to say, and see how the facts stood after talking with Chaffee. I did not go specially with that business, because I thought Chaffee would not do it.
- Q. Would not do what?
- A. Would not make that bargain and give it to Judson.
- Q. Did you know what the bargain between Chaffee and Goodyear was?
- A. I did not know until about the time of this difficulty.
- Q. Did you know what it was before you went to New Haven to see Chaffee?
- A. I think I did.
- Q. What did you understand it to be?
- A. I understood Chaffee had agreed for some—
- Objected to; objection overruled.
- Q. What did you understand to be the bargain between Chaffee and Goodyear at the time you went to see Chaffee in New Haven?
- A. I had learned that in some manner he had agreed with Goodyear to convey that extended patent to him.
- Q. For how much?
- A. I do not remember whether he told me how much or not; I learned subsequently that it was for \$3,000 and some other things.
- Q. Mr. Chaffee did not want to give it to any body but Goodyear?
- A. That appears to have been the case; his whole mind was upon it, and that was the objection he had—he had made an agreement, and wanted to carry it out.

Q. Now when you went to see Chaffee at New Haven, you saw him at his house?

A. Yes, sir.

Q. What day was that?

A. I think it was the Wednesday following, or Thursday.

Q. Thursday was the 5th of September?

A. We were there Thursday, and I believe I went up there Tuesday night or Wednesday morning.

Q. You have said that Chaffee was an old friend of yours; did you stay at his house?

A. Yes, sir.

Q. Sleep there?

A. I slept there all the time I was there.

Q. How long were you there altogether?

A. A day or two.

Q. On the day before—the 6th of September—did you and Chaffee talk this matter all over and consult about it?

A. I think we talked considerably about it; probably we did.

Q. Was it agreed between you and Chaffee on that day—the 4th of September—that Chaffee should execute a paper to Judson?

A. Not till after Judson came there; all I said to him did not affect the object at all.

Q. What object?

A. The very object you ask—to make that paper with Mr. Judson.

Q. You wanted him to do it?

A. I was not particular about it myself; I thought what Judson told me would be proper and right, and I told him that Judson would pay him more money.

Q. Did't you recommend to Chaffee to do it?

A. I think I did.

Q. But he would not?

A. He refused to.

Q. On what ground?

A. Because it was intended that the patent should go to Goodyear, and he was under obligations to make Goodyear the first offer, as he had before bargained, to carry out his original design.

Q. Did Mr. Judson arrange that he would be at New Haven at any particular time?

A. I do not remember.

Q. Did you send for him?

A. I know we did not send for him; I do not remember whether he agreed to come or not; I know he did come up; whether there was any agreement about it I do not know.

Q. What time did he get there?

A. I do not know.

Q. What time on the 5th of September did you first see him at New Haven?

A. I do not know.

Q. Did you spend the 5th of September at Chaffee's house?

A. About all the time.

Q. You dined there?

A. I do not know even that.

Q. Then the evening came; did you take tea?

A. I think I did.

Q. Mrs. Chaffee was at home?

A. She was.

Q. Now did Judson arrive there before or after tea time?

A. I do not remember.

Q. Did you first see Judson on that day when the paper was signed in Chaffee's house, or at some other place?

- A. I do not remember.
- Q. You have no recollection?
- A. No, sir; he was there, but at what time of day he came there I do not know. I saw him there, but the principal business we did was that evening.
- Q. What time in the evening did that business begin?
- A. Directly after tea; I should think about 7 o'clock.
- Q. In his parlor?
- A. In his house.
- Q. Do you recollect whether when the business began of executing that paper you and Chaffee were alone, and Judson came in; or whether you went into the room and found Judson there?
- A. I do not remember.
- Q. Was Mr. Candee there at the time you first saw Judson?
- A. That I cannot say; I know they were there.
- Q. You said he was there during the interview, and you were introduced to him?
- A. Yes, sir.
- Q. Have you any recollection as to whether Mr. Candee came there with Judson, or came at the latter part of the transaction?
- A. I have not; I have nothing but an impression; I know we were all there in the course of the evening, and what we did.
- Q. Did Judson produce a paper on that occasion?
- A. I think he did.
- Q. Which paper was it of these? (handing him two papers.)
- A. I don't think it was either of these; there was a draft, but it did not look like either of these.
- Q. Tell us how the conversation began?
- A. I cannot tell.
- Q. You don't remember how the business was opened?
- A. I say I cannot tell; I do not remember.
- Q. Nor who opened it?
- A. No, sir.
- Q. Tell us what was the very first thing you remember to have been said by any body at that time on the business of that paper or any paper?
- A. I cannot tell you.
- Q. Did Judson ask Chaffee to give him a paper?
- A. I do not know that he did; I know that Judson's aim was to get—
- Q. Never mind the aim; did he show Chaffee a paper?
- A. Yes, sir.
- Q. Did he read it to him?
- A. I think he did.
- Q. Did Chaffee read it himself?
- A. I think he did.
- Q. Did you read it?
- A. I do not remember that I did, still I have a faint recollection that I did.
- Q. When it was read, did Judson say any thing about that paper to Chaffee or you that you remember?
- A. Yes, sir; that paper, if I recollect right, was a draft of those papers of the fifth of September, and after a long conversation, and after Chaffee had consented to pass these papers to Judson; then, if I mistake not, Judson drew up these papers, I think in the house.
- Q. But I want the conversation that occurred before the paper was drawn up. What did Chaffee say to the draft?
- A. There was a great deal of conversation for a great while.
- Q. About what?
- A. Every thing that pertained to it—whether he had a right to give that paper to Judson. With what little eloquence Judson had, he persuaded him that it would be right; and I must confess that what he said convinced me, and I told Chaffee that I thought it was proper and right.

Q. I want to know in that conversation before the paper was drawn what was Chaffee wanting?

A. He wanted to have the paper go in its proper course to Goodyear.

Q. To Goodyear?

A. Yes, sir, that is what he wanted.

Q. To Goodyear and not to Judson?

A. He certainly did; that was his whole aim.

Q. What was Judson trying to convince Chaffee of?

A. That it would be right, proper, and just that he should get it into his hands as security for that money.

Q. As you do not remember precisely the conversation, was not this eloquence, or whatever it was, that Judson employed, intended to convince Chaffee that if he executed that paper it would be all the same in reference to Goodyear's rights, as if he made a transfer directly to Goodyear?

A. If I understood it right; it was to convince Chaffee that it would be very proper and right for him to transfer the paper to him, and more advantageous, because he had through me offered Chaffee a larger sum of money.

Q. What was that?

A. The agreement I think was that he should have instead of \$2,000, \$1,500 down, and \$1,500 a year for seven years during, to be paid quarterly. I think that was the final agreement.

Q. He wanted to convince Chaffee that it was a decided advantage over that bargain?

A. Certainly.

Q. You all agreed to that?

A. I thought so; it was my opinion.

Q. And that was agreed on all hands?

A. Yes, sir.

Q. Then, as Chaffee was to get more than under the old contract, what remained to convince him about was this, that Goodyear would have the benefit of the patent just exactly as if the transfer was made to him?

A. No, sir; Chaffee's whole objection was, as I have stated, that he should be doing a wrong to Goodyear; but as I said before—and I hope I shall be understood once for all—Judson did persuade us both that it was proper and right; and I think I stated yesterday that we inquired of Mr. Candee, and he said it would be—

Q. You stated that, and as Mr. Candee is present, I want to see how your recollections correspond. Did not Judson say to you distinctly, and to Chaffee distinctly, something to this effect, that if that paper was executed it would be all the same to Goodyear, and that he would have his rights in the same way, and be protected at the same time?

A. I do not remember a word of that.

Q. When you were examined in New York, did you testify to what I shall read to you? "Chaffee resisted to a late hour, and said he was doing a great wrong to Goodyear. Judson said it would be perfectly right—that it was doing no wrong to Goodyear."

A. I do not remember that I said it; I might have said it.

Q. Do you remember now that that did occur?

A. No; I do not distinctly—that Judson said it was doing no wrong to Goodyear. I may have used that expression and I may not; I do not remember all I testified to in New York.

Q. Do you say that was not said by Judson in that conversation?

A. I want to understand, and to have the jury understand the question.

Q. The question is this: Did Judson say in that conversation to Chaffee, or in his hearing, that the execution of that paper was doing no wrong to Goodyear, or any thing of the kind?

A. I think he convinced us, as I believe I stated before, that it would do no wrong to Goodyear.

Q. (By the Court.) The question is how he convinced you of that?

A. I understood Judson to say that he did some business for Goodyear, and

that he was very well acquainted with Goodyear; if I mistake not there was something to that purport, but not the language.

Q. What purport?

A. That it would be doing no great wrong to Goodyear; and I understood him to say it would be the same as to pass it to Goodyear, if I understood it so at all. The question is a very complicated one.

Q. If I understand the matter, the difficulty was that Goodyear was going to be cheated in the transaction, was it not?

A. I didn't say any thing about cheating. Chaffee thought he did wrong in not carrying out his obligation.

Q. That if Judson got it Goodyear would be cheated?

A. There was nothing said about cheating; he thought that as he had engaged to give it to Goodyear he ought to carry it out.

Q. But did either of you complain that he was going to be cheated by getting more?

A. No, sir; I do not think Chaffee had any such thought.

Q. Nor you?

A. No, sir.

Q. Chaffee was not going to be hurt but improved?

A. I thought so, and Chaffee thought so, I suppose.

Q. The only question then was whether Goodyear would be hurt by it?

A. I do not know whether Goodyear—

Q. After Chaffee was satisfied that he was getting more—that it was a more advantageous bargain than he had got before, was there any other difficulty than this: that if he gave this paper to Judson, Goodyear would be deprived of some rights?—was not that all that remained?

A. I know Chaffee expressed that probably he should be doing a wrong to Goodyear to pass it to Judson. It may be stronger; that was about the conversation.

Q. Well, he resisted till a late hour, because he wanted Goodyear to have the title. Now, which of these papers did Judson draw up first?

A. I do not know.

Q. I perceive that on this counterpart is your indorsement, and that this was delivered to you to keep; it seems to be written on a sheet of letter paper; does that bring to your recollection which of these papers was drawn first?

A. It does not; I am not free in my mind to say that they were both drawn there; my impression was that they were, but it might not have been so. After the bargain was consummated, I took but little interest with the papers were ready for the signature.

Q. You think there was a draft, and that, with these two, would make three papers; you recollect that there were three papers?

A. Yes, sir.

Q. But which of them was drawn first you do not remember?

A. Certainly not.

Q. I will call your attention to another circumstance. Mr. Judson had written the paper down to a certain point, and then you added—"And it is further expressly understood, and agreed, &c." Was not that your suggestion?

A. I do not think it was.

Q. How did it happen that Judson had not written it on the paper and you did?

A. I cannot tell.

Q. That is your writing?

A. I know I wrote it there.

Q. You had some distinct idea about it?

A. I presume I wrote it at somebody's request; and I rather think if the request was made by anybody it would be from Chaffee. I do not know that was either.

Q. Here is a substantial advantage reserved to Chaffee in this paper—the right to use the patent in his own business—and it is written by you; did you

write that as your own language, or from the dictation of Judson, or how otherwise?

A. I cannot tell at whose instance I wrote it; it must have been from the dictation of some one—whether Judson or Chaffee I am unable to say.

Q. Now I want to refresh your recollection on the other point about Goodyear, and the persons interested with him. I want to call your attention to this part of the agreement. You have stated already to the jury that it was compared, one reading and the other looking on and seeing that it was right. "And whereas said Charles Goodyear agreed with me, for himself and others, using my said patent under him, that they would be at the expense of applying for said extension of said patent, &c." You have said that you never heard of Goodyear and his licensees until a certain time; were not Goodyear and his licensees mentioned in that conversation before these words were written in that paper?

A. I do not remember the word licensees being used; it might have been, but it is so vague in my mind that I do not recollect.

Q. Was any explanation given by anybody at that time as to what was meant by the words "others using my said patent under him (Goodyear)?"

Objected to as giving construction to the paper; objection overruled.

A. I do not remember.

Q. Do you say that the result of that conversation and interview on your mind, as to what the parties had said, was, that Chaffee was to remain liable to Judson for the payment of those expenses of the extension?

Objected to; objection sustained.

Q. After one of these papers was written then Judson made a copy of it, did he not, in that place?

A. I believe he did.

Q. When Judson was engaged in copying the paper which had been agreed upon, what were the rest of you doing?—Candee, Chaffee, and yourself?

A. I do not remember.

Q. Were you talking about this matter?

A. It is likely we were, but I cannot remember any particular conversation.

Q. Did Mr. Candee say in what capacity he was attending there?

A. No, sir.

Q. Did he say he was one of the shoe associates?

A. Not that I heard of; I do not know that it was said.

Q. Did he take any part in the conversation?

A. I perhaps he did.

Q. Don't you remember one word that he said, or the substance of any words that came out of his mouth?

A. No, sir; no more than any other conversation 5 years ago in a party.

Q. The papers having been both prepared, they were signed. Did you then immediately leave the house? you and the other parties?

A. I staid there all night.

Q. Mr. Judson went off?

A. I think he did.

Q. Did Mr. Candee go with him?

A. I think they went out together—I am not sure.

Q. You all separated in a very friendly way?

A. O, certainly; I felt very friendly indeed.

Q. You thought your friend Chaffee had made a very good bargain?

A. I thought so.

Q. And refreshments were brought in?

A. That thing I cannot remember.

Q. You took the copy which Chaffee was to have, and kept it in your possession?

A. Yes, sir.

Q. Then it seems that Mr. Goodyear made his appearance, and that Judson wanted to hustle the papers out of the room?

A. He wanted the papers out of the way.

- Q. What time in the night was that?
 A. I should think about 10 o'clock—not far from that.
 Q. Mr. Goodyear lived in New Haven?
 A. I do not know any thing about that.
 Q. Did he come up into the room and get into Chaffee's house at all?
 A. I saw him inside of the house.
 Q. He came into the house?
 A. Certainly.
 Q. In this hustle of the papers out of the room there was an inkstand there I suppose?
 A. I think likely.
 Q. Do you remember?
 A. Yes, sir; I do remember it.
 Q. Then the inkstand was taken out of the room?
 A. All the writing materials.
 Q. So as to show no trace of the writing?
 A. Yes, sir.
 Q. Who carried them out?
 A. I know they were put out somewhere.
 Q. Who took them?
 A. I think Judson was about as active as anybody.
 Q. Didn't you help?
 A. I don't know whether I did or not.
 Q. Didn't you write in taking these materials out of the room so that Goodyear should not see them?
 A. I have no recollection.
 Q. Have you any recollection about it?
 A. I have stated that I had a recollection.
 Q. What was the purpose of taking away the papers?
 A. To keep them out of sight of Goodyear.
 Q. Not to let him know that he had been cheated?
 A. I do not know what it was for.
 Q. Did Goodyear come into the room while Judson was in it?
 A. I cannot tell you.
 Q. I want your recollection?
 A. I do not know.
 Q. Did Judson go out of that room at all, at any time that night, till he took his departure?
 A. I can't tell.
 Q. Then you cannot remember that he took any thing out of the room?
 A. I knew the papers were hustled out of the room; I cannot tell who did it; it was under the direction of Judson.
 Q. No one objecting?
 A. Of course not.
 Q. When Goodyear came in, did any body speak to him?
 A. It is a very natural consequence that we did.
 Q. Did any body say any thing to him?
 A. I was introduced by some one, I do not know who.
 Q. There was Chaffee, Omden, Judson, and yourself, and you had been executing a paper; did any one of you say one word to Goodyear to let him know that such a paper had been made?
 A. Not one word.
 Q. So that all of you agreed to conceal that?
 A. No, sir.
 Q. Well, you all avoided saying any thing about it?
 A. At the request of Judson, not a word was said.
 Q. Now, sir; on the following day, when you had this counterpart of Chaffee in your possession, did you know that day?
 A. I think it was the next day.

Q. Before you left, did you see Mr. Parmelee, who has been examined in this case?

A. I do not know Mr. Parmelee; I saw somebody.

Q. This is Mr. Parmelee (pointing to him in Court).

A. I know him; I did not know him then.

Q. Did you see him in New Haven the following day?

A. I do not remember that I did.

Q. Did you go to Goodyear's house or place of business the next day?

A. Yea, sir.

Q. Do you remember whom you saw there?

A. I remember seeing his wife, daughter, and himself.

Q. Did you express to any or either of them your great satisfaction that that paper had been executed, or any thing of that kind?

A. I do not remember that I did.

Q. Did you go to Candee's factory?

A. I think I did.

Q. Did you see Mr. Parmelee or any person there?

A. I saw a gentleman there that I supposed to be the foreman.

Q. Did you talk to him about the execution of that paper the night before?

A. I do not remember.

Q. Did you express to him your great satisfaction?

A. I do not remember that I did, but I must confess that I did feel satisfaction; I felt very well about it.

Q. You stated that Chaffee told you, as part of Judson's conversation with him, that Judson told him that if he did not execute that paper, he would break him up in his business—that he could do it and would do it; what business was Chaffee in at that time?

A. I did not know myself; I had not seen Chaffee for several years. I understood Judson to say that he had now got into a comfortable business, and was getting up into the world after some drawbacks—that he was just getting on comfortably—that he was hoken for the whole expenses to him—that he had made a great outlay on that extension, and would have security on it—that he would have it if he could get it—that he would break him up in his business—that he could do it and would do it.

Q. What business had Chaffee that he was going to be broken up in?

A. I do not know.

Q. Don't you know that he had no business then, being in the employment of Goodyear?

A. No, sir.

Q. What did you understand the business was besides that?

A. I did not understand any thing about it; I had not seen the gentleman till I went to Washington for ten years.

Q. Didn't you understand from somebody at that time that Chaffee was in business at Providence?

A. No, sir, I do not remember that I did; he was living in New Haven.

Q. Didn't you testify at the trial in New York that you understood at the time of that threat to break him up in his business, that he was in business at Providence or somewhere else?

A. It strikes my mind that I heard that he was there in business, or going into business, but I have no very definite idea about it.

Q. Did you see Chaffee any more at all during that year, 1850?

A. I do not recollect how long it was after that that I did see him; I think it was here at Providence. I rather think I did not see him that year.

Q. Did you see him during the years 1851 and '52?

A. I think I did.

Q. Did you have any correspondence with him?

A. None that I remember.

Q. Were you ever at his place of business between September 4, 1856, and July 1, 1858?

A. I cannot fix the time that I came down to Providence; I should think

that between that time there was something about some insurance, and I think my wife and myself went to Chaffee's house, and I think I went to some factory where Chaffee was engaged.

Q. Did you know Horace H. Day between September, 1860, and July 1, 1863?

A. The first time I ever knew of Horace H. Day to speak to him, was in August, I think, 1866, at Newport.

Q. You became intimate with him then?

A. I am certainly very intimate with him.

Q. When you were in New York you were twenty-eight days attending that trial before you were examined?

A. I do not know—long enough; you know better than I do.

Q. During all that time you staid at Mr. Day's house?

A. Yes, sir; longer, too.

Q. Were you subpoenaed to attend that trial?

A. No, sir; nor this.

Q. You said, in your direct examination, that you told Judson it was a very great pity, after he had succeeded in extending that patent, that any difficulty should happen by which he should not carry out the design; that he agreed with you about that; that you made some proposals; that you stated, you thought, to Judson that the sum he was to give him was small, and if he would give more to compensate Chaffee, Chaffee might be induced to pass the patent to him, and settle with him; that Judson agreed with you upon the point, and it was decided that you should go to Chaffee, and make proposals;—what proposal did you make to him, except to give a larger compensation?

A. I do not know exactly what the proposals were. I may say this: I know that Judson and I talked it over very friendly, and we were both anxious to have the matter settled; and I should not be surprised if Judson had made some of those proposals himself. I do not wish to be understood that I made the whole thing there.

Q. I want your best recollection on this point. Who was it that proposed the \$1,500 a year and the \$1,500 bonus?

A. I think I did.

Q. Didn't you say in New York it was Judson?

A. I do not know what I said in New York altogether.

Q. Do you remember one of the jurors asking you, "Did Judson agree to that?" and your answering "Yes," or something to that effect?

A. I have no distinct recollection; if I should be asked the question now, I should say the proposition was made, and Chaffee did agree to it.

Q. Another question was put to you in these words: "The proposition was accepted,—the \$1,500 down, and \$1,500 annually?"

A. I do not recollect of that being asked distinctly; I think it was asked, and I answered yes.

Q. You have spoken about an alteration in these papers; this paper, I see, states, that the payment was to be at the rate of \$1,200 per annum, although the agreement was, in fact, for \$1,500, so that that alteration was made in that paper?

A. Yes, sir.

Q. What other?

A. Filling up the quarterly payments, so as to make it correspond to the \$1,500.

Q. What other?

A. I do not know of any other.

Q. No other?

A. I do not remember any other.

Q. If there were any other, it is a pretty important circumstance.

A. I do not remember; that was the principal.

Q. If there was any other particular, small or great, in which that paper was to be altered, so as to meet the agreement of the parties, I want you to state it to the jury, other than the \$1,500?

A. I do not remember that there was any other agreement; I think that was the main feature.

Q. That being made, the paper was complete; was not that the agreement?

A. I have stated the agreement that he was to pass that paper; I am not lawyer enough to know about the completion of papers; I have very little to do with lawyers.

Q. You are lawyer enough to write "*et al.*"

A. No, sir; that shows my ignorance.

Q. Will you tell me what you meant by that when you wrote it?

A. Just what I wrote.

Q. Now, sir, in regard to the original parchment, with the extension indorsed upon it; you say Chaffee or you bought it?

A. I said so.

Q. Was it produced or shown at all on the 5th of September?

A. I do not think it was; I do not remember that it was.

Q. Was it in Chaffee's house on the 5th of September?

A. I do not know that.

Q. Was it handed over that night with this paper?

A. I do not recollect that it was.

Q. Will you state that it was not?

A. I will not.

Q. Will you state that it was not handed, in your presence, by Mr. Chaffee to Mr. Judson, on the night of the 5th of September?

A. I do not remember that it was.

Q. Do you remember that it was not?

A. I do not.

Q. The next day, then?

A. No, sir.

Q. Any time?

A. No, sir; I do not remember any time.

Q. Nor don't remember any thing about it?

A. No, sir.

(Mr. BRADY here obtained the original draft of the paper of the 5th of September from the Counsel on the other side, and handed it to the witness.)

Q. Is that the paper?

A. I should think it was; it looks very much like it.

Q. Now does that enable you to remember what objection was made to it by Chaffee?

A. No, sir.

(Mr. BRADY here read the paper.)

Q. I have read a paper, which expresses that the consideration to be paid Chaffee was \$8,000; now, was not the objection by Chaffee that \$8,000 would not do,—that he must have \$1,500 a-year, and \$1,500 paid down?

A. I do not know whether he objected at the time. That paper was read to that effect; I saw that paper, but whether I read it or not I am unable to say; I think I heard it read.

Q. Do you know in whose handwriting it was?

A. No, sir.

Q. Did any body say whether it was in Mr. Staples' handwriting?

A. No, sir.

Q. Did you know Mr. Staples' handwriting?

A. No, sir.

Q. You don't remember one word that was said about that paper when it was produced?

A. Not particularly, because it was out of my mind; I had very little to do with the making of the papers.

Re-cross-examined by Mr. Richardson.

Q. Do you now remember distinctly that this paper was read at New Haven?

A. No, sir.

Q. Was there any thing said about whose writing it was?

A. No, sir.

Q. Were you summoned here as a witness?

A. No, sir.

Q. At whose request did you come?

A. At Mr. Bradley's.

Q. How did you get news from Mr. Bradley that he wanted you?

A. By letter.

Q. You came on that letter?

A. I did; I have it with me.

Q. Did Mr. Judson, at New Haven or at New York, say any thing in reference to whether that patent should, under any circumstances, go into the hands of Goodyear; and if so, what did he say?

A. I stated that yesterday.

Q. What did you state?

Objected to as having been gone over already.

Mr. RICHARDSON said, that Mr. Brady had read a portion of the examination in New York to the witness, but not the whole of it; and he thought that upon the new point raised on the other side about the threats at New Haven, he had a right to inquire further.

The COURT. You may put it.

Q. What did he say in reference to the patents ever passing into Goodyear's hands?

A. He said it should not pass into Goodyear's hands if he could prevent it.

Direct resumed by Mr. Brady.

Q. That is what he said to you?

A. Yes, sir.

Q. You are certain he did not say that to Chaffee?

A. I do not know whether he did or not.

Q. Did he?

A. How can I tell?

Q. Did you ever hear him say it to Chaffee?

A. No; Judson said it to me.

Q. Were you not formally subpoenaed in this case?

The COURT. What difference does that make?

Mr. BRADY. The gentleman wanted to prove that he was not.

Mr. RICHARDSON. You wanted to prove that he was not summoned in New York, where he could not be summoned.

Witness. I stated to Mr. Bradley that he need not be at the expense of summoning me, but that if he would write to me I would come.

M. CANDEE RE-CALLED AND EXAMINED BY MR. BRADY.

Q. On the 5th of September, 1850, were you at Mr. Chaffee's house?

A. Yes, sir.

Q. What time in the evening did you go there?

A. We went there the fore part of the evening.

Q. Whom did you see there?

A. I went there with Mr. Judson; when we arrived, Mr. Woodman and Chaffee—

Mr. JENCKES. What is the object of this testimony?

Mr. BRADY. To contradict Mr. Woodman.

Mr. JENCKES. On what point?

Mr. BRADY. In regard to the evidence you have produced of what you call fraud.

Mr. JENCKES. If you make your case on this point, you must put in the whole of your defence.

After some further discussion upon this point, the Court thought the defendants ought to wait, and put in all their rebutting testimony at the same time.

So this part of the testimony was reserved.

Q. Do you know Mr. Chaffee's handwriting?

A. Yes, sir.

Q. Look at these receipts and say if you think they are signed by him?

A. (Examining them.) Yes, sir, they are.

Mr. BRADY offered to read the receipts.

Mr. RICHARDSON objected, that they were no evidence of the payment of money.

After some discussion—

The COURT said: Mr. Chaffee is to be put on the stand, and then, of course, you can inquire about them.

Q. That receipt is a receipt to you; did you pay the money mentioned in it to Mr. Chaffee?

A. (Looking at it.) I did.

Mr. BRADY. Read the receipt dated September 19, 1850, from three of the shoe associates, of \$375 each, making \$1,125, being in advance of an agreement between Judson and Chaffee.

Q. There is another receipt to you; was that money paid by you to Mr. Chaffee?

A. Yes, sir.

Mr. BRADY read the receipt dated Oct. 7, 1850, from Mr. Candee, of \$375, being the proportion of the Hayward Company of an advance of \$1,500 to Chaffee.

The other receipts were reserved, to be given in evidence when Chaffee was examined.

Q. Was that \$1,500 all paid up to Chaffee?

A. Yes, sir.

Q. Who paid it of your knowledge?

A. The \$1,500 was paid by the four shoe associates.

Q. As an advance on that contract?

A. As an advance on that contract.

Cross-examined by Mr. Richardson.

Q. You say the whole of the \$1,500 was paid; I want to know your means of knowledge on that subject; did you pay it yourself?

A. I paid three quarters of it, I think, through my hands; I think the whole of it went through my hands; I took a receipt for three quarters of it.

Q. Are you certain that the other quarter was ever paid?

A. Yes, sir.

Q. Did you see it paid?

A. I am certain it is paid. I think it was paid in this way: by a draft by me on Mr. Ford—that is my impression; and that draft was paid. I did not see the money handed over.

Q. A draft drawn by you on Mr. Ford?

A. I think so.

Q. Mr. Ford is a licensee?

A. Yes, sir.

Q. You drew a draft on him?

A. I think I did, or wrote him.

MR. JUDSON RE-CALLED AND EXAMINED BY MR. BRADY.

Q. The fund provided by the licensees of Goodyear under the papers which have been given in evidence—the 15 per cent. &c.—was that paid by the licensees and associates?

A. All the funds from the 15 per cent. and paid by Mr. Goodyear, came into my hands; that was payable to Mr. Staples and myself, and what Mr. Staples received he received from me. All the 15 per cent. of the shoe associates, came into my hands and was all disbursed by me, and the expenses—

Mr. RICHARDSON. We object to any thing about the expenses.

Mr. BRADY wished to prove that there was more than enough after satisfying all other charges against the fund, to pay the expenses and costs of all kinds attending the procuring of this extension.

Mr. RICHARDSON. If the object is to prove that it was originally so applied, we object.

Question argued; evidence allowed *de bene*.

Q. Was any account kept by anybody of the funds paid by the licensees out of their tariffs for this trust mentioned in the papers?

A. The trustee of the shoe associates kept his account and the moneys—the 5 per cent., of which he was the trustee—was paid over to me, and an account was kept of these moneys received, as received by me, and of the other moneys. But there was no separate account, and all the moneys that were disbursed by me, were disbursed on the general account of all matters relating to Goodyear's patent, and the patent business. There was no separate account of any particular business.

Q. After the 5th of September, 1850, and before the 1st of July, 1853, under whose direction were the moneys expended and appropriated according to the trust created originally in Mr. Staples and yourself?

A. Before and after the extension, Mr. Greacen was my banker, and kept an account of all moneys received by the trustee, and disbursed them under my directions.

Q. Out of what fund, if any, were the expenses of the extension paid?

Mr. RICHARDSON. That we object to. The gentlemen offer to show that the expenses of the extension were paid out of this fund. Any thing that transpired prior to the 12th of November, 1851, in relation to the payment of these expenses is in these two papers, and they are bound by them, and cannot go back of them.

A long discussion here arose, which continued till the close of the next day (14th day, Friday, Feb. 9), involving the question of whether Dr. Hartshorn & Co. could claim a license under the papers of the 5th of Sept. and 12th of Nov., or could be considered as one of the licensees, for whose benefit Judson claimed to have procured these papers.

FIFTEENTH DAY.

PROVIDENCE, *Saturday, Feb. 10, 1855.*

**TESTIMONY OF JUDSON; TOMPKINS; LEAVEENS, CANDEE,
BROWN, MARING AND BURR.**

The Court delivered his opinion upon the question discussed on the preceding day. He was inclined to admit whatever evidence was proper for the purpose of rebutting the allegation of fraud, set up by the plaintiff, in order to destroy the agreements of Sept. 5, and Nov. 12, and for whatever other purpose it might become necessary, in order to sustain those agreements, at least to show that they ought not to be revoked. It did not seem to him, however, that the question whether the shoe associates had paid their share of the expenses, was at all material in that view of the case, because if they had not paid up to Judson, still the right to Judson would remain; he held his rights under these agreements. He would allow evidence to be put in to show that somebody had paid.

One of the jurors being absent, it was agreed between the counsel that the case should proceed, and that the testimony of the witnesses should be read to the absent juror from one or both of the reporters' notes.

MR. JUDSON RE-CALLED AND EXAMINED BY MR. BRADY.

Q. Were the expenses of this extension paid on or after the 5th of September, 1850?

Mr. JENCKES. That is the same question.

The COURT. I do not think it is. They are not required to prove even that the expenses were all paid, because from the nature of the case it was impossible, from the fact, that they had not been ascertained. Therefore they were in the nature of conditions subsequent; the annuities certainly must be a subsequent condition. So far as the time when this agreement was entered into it is admitted that the expenses were paid, as far as they had been ascertained.

Under this ruling of the court the witness was withdrawn.

CORNELIUS S. TOMPKINS, SWORN AND EXAMINED BY MR. BRADLEY.

Q. What has been your occupation for the past 30 years?

A. A machinist.

Q. How soon did you commence that business? in what year?

A. Somewhere about the year 1831, I think, I first commenced working on machinery.

Q. What was your first knowledge of the use of heated cylinders made of iron, and revolving with an unequal motion upon one another?

A. The first knowledge I ever had was, I think, about the years 1831 or 2.

Q. How did they revolve upon one another? with an equal or unequal motion?

A. An unequal motion—friction motion as we term it.

Cross-examined by Mr. Jencks.

Q. What were these cylinders used for?

A. The first one I saw was in 1831. I had seen cylinders before running together—iron cylinders, the periphery of one running faster than the other, for the purpose of glazing, as it was termed.

Q. Glazing what?

A. Glazing paper. The one I spoke of in 1831 or '2, was for glazing cloth—an iron cylinder running upon a paper one for glazing cloth. Those I saw in 1836, '7, and '8, were iron cylinders running together, heated by steam, for the purpose of glazing paper—the periphery of one running faster than the other.

Q. In paper mills?

A. In a paper mill. I had seen other modes of glazing paper—what was termed the flint glaze; that was simply by a flint passing upon an upright lever.

Q. Where did you see this?

A. At Newton.

Q. In 1836, '7 and '8?

A. It was along in those years.

Direct resumed by Mr. Bradley.

Q. Those were both of iron?

A. Both of iron heated by steam, the surface of one running faster than the other.

**MR. LEAVERNS RE-CALLED AND EXAMINED BY MR.
BRADLEY.**

Q. You wish to correct a mistake in regard to the time at which you knew steam to be introduced into air cylinders, revolving with an unequal motion. State what time—antecedent to what year?

A. It was previous to the year 1834—in 1833 and 31

Q. (By Mr. JENCKES.) You refer to paper mills?

A. Yes, sir.

The defendants here rested their case, as far as relates to the validity of the patent, but proceeded to call Mr. Judeon and Mr. Candee upon the other part of the case.

MR. JUDSON RECALLED AND EXAMINED BY MR. BRADY.

Q. When did Mr. Goodyear know that Hartshorn and Hayward were using in their business the Chaffee machine and process and his own?

A. He knew of the license to Dr. Hartshorn very soon after it was granted. Whether Mr. Goodyear was in Dr. Hartshorn's factory I do not know, but I have no doubt, and I think he had no doubt that he was using the Chaffee machinery.

Q. Has Mr. Goodyear received —

A. Mr. JENCKES. That is all upon the point ruled out, as I understand, or on no point.

Mr. BRADY said he simply wanted to show that Mr. Goodyear, so far as his right or interest was concerned, made no objection, but on the contrary received the tariff paid as compensation, so that he can have nothing to say against this claim or title.

The Court admitted the question.

Q. When did you first know that Hartshorn & Hayward were to use or were using what is called the Chaffee machine or process?

A. I learned that Dr. Hartshorn was using it at the time of the application for the extension. When Mr. Hayward became connected with Dr. Hartshorn I do not recollect.

Q. It is already shown by you that you knew of the execution of that paper by the associates and Hartshorn & Hayward, of February 1, 1851.

A. I did.

Q. Did you consent to their using the Chaffee machine and process?

A. I did.

(Objected to unless the consent is in writing.)

Mr. BRADY claimed that it was the draft of the agreement of February 1, 1851, being in the handwriting of Mr. Judson.

Evidence allowed *de bene*.

Q. You consented to the use of the Chaffee machine and process by Hartshorn & Hayward from the time of the execution of the paper of February 1, 1851, and at all times subsequent?

A. I did; they used it with my approval.

Q. Did Mr. Goodyear receive this tariff of a half cent per pair on the shoes made by Dr. Hartshorn & Hayward under that paper of February 1851?

A. I suppose Mr. Candee can answer that question better than I can. I have no doubt he received it, as I received mine. The apportionment was made by the trustee, and all paid over, I have no doubt, regularly to all the parties entitled to it.

Cross-examination waived until the witness is recalled, as intimated by the defendants.

MR. CANDIE RE-CALLED AND EXAMINED BY MR. BRADY.

Q. I ask you whether Mr. Goodyear has received, or whether any one has received the tariff of half a cent per pair under the paper of February, 1851?

A. That has been paid to Mr. Goodyear semi-annually, *reserving the 15 per cent. for his counsel.*

Q. For the trust fund?

A. For the trust fund.

Cross-examined by Mr. Richardson.

Q. How do you know Goodyear has received it?

A. I paid it myself—a considerable portion of it. I have the books which have the entries.

Q. He receives about a half a cent?

A. A half a cent.

Q. There is 15 per cent. of that reserved?

A. That is appropriated to his counsel.

Q. To Judson?

A. To Judson.

Q. To whom did you pay the 15 per cent.?

A. To Judson; he has received it.

Q. Are you the treasurer of these four associates now.

A. Yes, sir.

Q. And the trustee?

A. Yes, sir.

Q. Is Mr. Ackerman dead?

A. Yes, sir.

Q. When did he die?

A. About a year since.

Q. What was his first name?

A. Jonathan C.

JAMES BROWN SWORN AND EXAMINED BY MR. BRADLEY.

Q. Have you been summoned by the plaintiff in this case—Mr. Day?

A. Yes, sir.

Q. State whether you have any knowledge of Mr. Millard's using a rubber grinding machine in this city; and if so, what kind of a machine was it, and when did you know of its use?

A. It is a long time since I had any thing to do with it. If I recollect right, the machinery he used for grinding rubber was two rolls made of iron—they were called friction rolls. I never looked much into the thing that I recollect. That was about the manner of the machine. They run together something like this (pointing to the model with rollers one above the other). The machinery for spreading the rubber was made of four iron rollers set upon a frame, I should think, something like twelve feet apart. The rubber was placed upon the cloth at the first end of the machine and passed through, and these rollers at the further end, as I understand, were to even the rubber as it came through—make it more even than what the first rollers did. That is about all I recollect of the machine.

Cross-examined by Mr. Richardson.

Q. What year was that?

A. I think it was the year 1835.

Q. What time in the year?

A. It was early in the spring that we commenced in the business, or that Mr. Millard did. I should think probably some time in March we got to work.

Q. That was in Providence?

A. Yes, sir.

Q. Did you sell these machines to go to New Brunswick?

A. I sold them to Mr. Millard, and I understood him that he was going to New Brunswick with them.

Direct resumed by Mr. Bradley.

Q. You say "we commenced;" when did you commence in that business?

A. In 1835.

Q. How early?

A. I just stated; the first of March, I think, we got to work.

Q. You say "we got to work;" including yourself?

A. I say we, because I was interested in the business. Mr. Millard had the operative part of the business to do, and I furnished him the capital.

Q. How did you come first to hear with regard to this machine?

A. Through Mr. Millard.

Q. Was he engaged in it?

A. He had been engaged in it.

Q. He came to you to get assistance to carry it on?

A. The company that he was with gave up the business, and I bought the machinery.

Q. Do you know where that company carried on their business?

A. It was over the new market, up town.

Q. Can you fix the date when you bought the machine of this other company?

A. I cannot.

Q. You have no means of fixing it?

A. I do not know that I have.

Q. Are you able to fix the time when they were running, or how early that company began?

A. I cannot; the first I knew of the machinery Mr. Millard informed me.

Q. You don't know how long they had been running up there?

A. No, sir.

Q. (By Mr. RICHARDSON.) You say it was in March, 1895, when you first heard of it?

A. I think we commenced our business somewhere in March—the early part of it.

(The defendants have rested.)

Mr. JENCKES. We make a commencement of this part of our case, by offering the answer of the defendants to this suit.

The COUNSEL for the defence insisted that the amendment should be read together with the original answer.

The COURT decided that the counsel for the defence might read that part.

Mr. BRADLEY took an exception to the ruling.

MR. MARING RECALLED, AND EXAMINED BY
MR. RICHARDSON.

Q. I believe you have already stated that you were acquainted with the Chaffee machine at Roxbury?

A. I was, somewhat.

Q. I would like to have you fix the date of your first knowledge of its operation?

A. I was acquainted with the production of it before I saw the machines.

Q. How early were you acquainted with the productions of it?

A. I cannot fix the time precisely, but it was in 1835.

Q. Where did you go to, from Roxbury, to go into business?

A. To Providence.

Q. At what time did you go to Providence?

A. In 1835.

Q. Where did you obtain your stock when you went to Providence?

A. At Roxbury.

Q. Manufactured by the Chaffee machine?

A. Yes, sir.

Mr. BRADLEY. The witness should speak from his own knowledge.

Q. Tell about your own knowledge?

A. There was a contract, as I was advised upon the subject, made with the Roxbury Company as it then stood, Mr. Armstrong being its agent, to make, I think, 4,000 pounds of sheets suitable for our use. I had the direction of it, went back and forward, and saw the making of the article. Mr. Chaffee then had charge of the machine, and there was an understanding between him and me as to how we should manage this matter. I will go into that particular if you wish it, though I do not know whether it belongs to the subject. In order to meet our views, certain sheets or pieces of rubber were selected and cut in two. Several were held together and cut in two, and each one was numbered, so that if I wrote to him that I wanted so much of No. 1, having that number before him, he could send it on; and so of No. 2,—different descriptions of cloth.

Q. Describe these sheets of rubber?

A. They were sheets of clear rubber; some were for certain purposes, colored yellow, red, or whatever might be required,—red, perhaps, on one side,—and others were black, for another purpose.

Q. Did they all have coloring matter mixed with them?

A. In some parts I should think there was not coloring matter in them. It was clear rubber, only so far as the surface. If we wanted it for lining, we wanted red, or yellow, or some other color. These sheets were made up of various thinner sheets run together, and if we wanted it for lining it might be No. 4. The surface merely—the last sheet of all—was colored, to make up the thickness. They were all run, at first, about the same thickness; but then lapping two, three, or four together, made up the thickness required for the different purposes.

Q. What year was this?

A. It was 1835, the latter part.

Mr. BRADLEY inquired what was the purpose of offering this testimony.

Mr. JENCKES said it was to shew that from the first the quality of the goods manufactured by the Chaffee machine was perfect.

Mr. BRADLEY. We have already put in evidence to shew that that machine was not in accordance with the machine patented.

Mr. JENCKES. The gentleman may think he has put in such evidence; if he has, we wish to remove any such testimony.

The COURT admitted the testimony.

Q. When did you first see any of these sheets of rubber made by this machine?

A. Do I understand you to distinguish between sheet rubber and rubber cloth?

Q. I mean that which was made on the cloth?

A. I can only say, without refreshing my memory by books, that it was in the winter of 1887 and '88—I am inclined to think in the early part of that winter,—that I saw the first productions of the machine.

Q. How long did you continue to take your stock from Roxbury to Providence?

A. I am inclined to think it was in December, 1888, or January, 1889; I cannot be positive; it was some time in that winter.

Q. What did you do for stock when you ceased taking it from Roxbury?

A. We then went into machinery of our own partly. In the first place, there was machinery bought, and brought from Lynn, as I understood, and experimented upon for making stock.

Q. What kind of machinery was that?

A. It consisted of two rollers—I allude now to the spreading portion of it, —and, I should think, from my understanding of the reading of the Atkinson patent, that it answered best to that machine.

Q. Didn't you know it to be the old Atkinson machine?

A. I did not at that time. I never read that patent until since I came into this Court. We did not then succeed with that machinery. The preparing part we lacked. We never could succeed in making it operate.

Q. Was there a preparing part that came with it?

A. Yes, sir.

Q. What sort of machine was that?—when and where was it made?

A. I cannot state where it was made only from hearsay, and hardly from that.

Q. What was that machine?

A. If I should compare it to any thing, I should say it was a coffee-mill turned upside down. I cannot describe it any more accurately perhaps. There was a comb running upon a shaft with the gearing below. It had coarse teeth at the top, growing finer towards the bottom part of the comb, that run into a shell of iron, with teeth to match, only in the reverse way, so that they would cross one another and act like shears, the teeth growing finer in each one towards the bottom. This shell had a tube run up from it and attached to it, and the direction was to put the rubber into that tube. We had a piston or weight to drive that through. At the termination of this comb, or below it, was a scraper, which scraped the substance off into a dish.

Q. Was it necessary to dissolve it in turpentine before you used the rubber?

A. That was the direction.

Q. Did you so use it?

A. We so used it.

Q. Did you so use it when you commenced manufacturing?

A. Yes, sir.

Q. You then knew of the Chaffee process?

A. Yes, sir, perfectly.

Q. Did you make goods with this machine?

A. We did not.

Q. What did you do then?

A. I suggested to my employer the adoption of two rolls—I do not know whether there was any definite size—running together with a friction motion.

Q. Did you have some manufactured?

A. No, sir; there was no answer made to my suggestion by my employer at the time, but in course of time I was requested to go to the Phoenix foundry machine shop, and there see a pair of rolls partly finished, set up before they were completed, for my inspection, as I supposed. They were afterwards finished—some little alterations made, I think—and brought into the factory, set up and tried.

Q. Up to that time you had used turpentine to dissolve your rubber?

A. Yes, sir—what we called dissolvers; we used a small quantity; it would

hardly be called dissolving, according to our understanding of the business before; we aimed to get a less quantity, and make up the rest by machinery.

Q. When did you commence that aiming to use a less quantity?

A. At that time.

Q. In 1839?

A. We aimed to do it in the bark or pepper mill we got from Lynn, but we could not make that work.

Q. Was that in 1838 or '9?

A. It was some time in the winter of 1838 and '9 that that machinery came I think I have stated.

Q. Where did you first commence the rubber business, at Roxbury?

A. As a business in Roxbury; I instituted some experiments of my own perhaps prior to that, but the first business was in the Roxbury factory.

Q. What date did you fix that?

A. I went there in 1834.

Q. When did you first hear of any process of reducing rubber without using a solvent?

A. Never till I heard of its being done by the Chaffee machinery.

Q. How much solvent does it require to reduce a pound of rubber, so that it can be worked on cloth without machinery?

A. From my experience, I should say, over a gallon—perhaps a gallon and a pint, to bring it into a condition to put it on cloth without the rollers—to press it on.

Q. You say you got some rollers and then tried to work with less solvent: how much solvent did you use then?

A. We used a pint to the pound.

Q. How did you apply it?

A. We put the rubber into a can and poured this amount of spirits upon it and stirred it up; after it remained a short time we then reduced it in the rollers to a pulp, that we could spread upon cloth by larger rollers.

Q. If your rollers had been large enough you would not have used any solvent?

A. I had seen it done without.

Q. You knew the process?

A. I had seen it done without.

Q. Did you heat the preparing rollers with steam?

A. We did not, I think.

Q. Did you afterwards have other machinery built, and if so, how soon?

A. In 1840, or some time in 1839 or '40, we commenced building another set of machinery for working rubber on a similar principle.

Q. Similar principle to what?

A. To the one I had been trying at that concern.

Q. With or without a solvent?

A. With a small portion of solvent.

Q. Did that machinery succeed?

A. Very well.

Q. When did you get to using it without a solvent?

A. I never used it without a solvent—without any solvent—to any extent.

Q. Except at Roxbury?

A. Except at Roxbury.

Q. How long did you continue in the manufacture?

A. Up to 1849.

Q. Didn't you heat this last machinery?

A. The second machinery that I had built, I heated the preparing rollers with steam.

Q. Why couldn't you work with that machine without a solvent?

A. I considered it too light to produce any effect. We were obliged to run it very quick. Perhaps I might answer the question another way; I wish to be understood. We did not dare think of any thing at that time, in the infancy of the business, like heavy machinery that would work with slow speed.

Q. You were afraid of the expense?

A. We could not afford it.

Q. Now I want to know about the quality of the goods made by the Chaffee machine; how they compared with goods made by solvents?

A. At the time I first became acquainted with the goods they were an improvement upon any thing else that had been made up to that time. The first sheets were not quite so good as they became afterwards; they had had but very little experience in making sheets at the time I left Roxbury. They became better as they had more experience in the business. The business of making sheets was somewhat distinct.

Q. (By the Court.) Did you speak of the cloth?

A. The cloth was the only thing made at the time I speak of; when I left there I came to Providence. The making of cloth was considered a very great improvement, inasmuch as we got clear of the camphene, the smell of it, and some other difficulties we labored under by putting in camphene to any extent. Before that time we had used a large quantity of camphene, and the goods smelt of it, heated, and became good for nothing; so that so far as the cloths went, or any other articles, there was that improvement, as we considered it.

Q. Did you ever know any crude rubber made into any kind of goods by the use of the Chaffee machine?

A. Do I understand you, without any solvents?

Q. Yes; or without any component parts?

A. If it was made by the Chaffee machine it was always made without solvents.

Q. Did you know of any rubber being made into any articles for wear?

A. Yes, sir; great quantities.

Q. How did it turn out?

A. It turned out well so far as I know. I saw goods a number of years afterwards, and found them sound, as we used to call it.

Q. Have you got any of these goods now?

A. I think I have at home.

Q. In what shape?

A. I have got one shoe, I think, that was made in Roxbury in 1836, and goods made from that machine.

Q. How is it, decayed?

A. Not at all. It had not the last time I saw it.

Q. Were there large quantities of shoes made at Roxbury?

A. Yes, sir.

Q. How many pairs?

A. I cannot tell.

Q. Let us have some idea, as near as you can.

A. I think for several months at least (whether it might hold good for a whole year or not I cannot say) we got up some days 400 pairs a day, and some days not so much, according to the working of the goods. We might average 300 pairs a day for a number of months.

Q. Can you fix any thing like a general amount, whether it was 5,000 or 500,000 pairs?

A. I could not from my recollection. We did a pretty large business, and in some instances we calculated to average 400 pairs a day; but I do not think we averaged that, taking a month together.

Q. How long did that continue?

A. It is a good while ago, and I have not refreshed my mind in any way from any circumstances, but I should think we must have averaged certainly 300 pairs a day for a year, or not far from that. It might have fallen short. I have had the books, and kept the accounts, but I am not prepared to answer positively.

Q. Did you make clothing at the same time?

A. Yes, sir.

Q. Life-preservers and air goods?

A. Yes, sir.

Q. Boots?

A. Yes, sir.

Q. What sort of clothing was made?

A. Coats, caps, pantaloons, pantaloons with feet (part of them came under my department and part under others, and they were attached together afterwards), together with a great variety of articles which I cannot name particularly. A great many things were made and suggested.

Q. Did you make goods for government?

A. I think I recollect hearing of goods being made for the government. The latter part of the time I assisted in making cloths with this machine that I understood were to supply a government order. I saw some of it when it was made up.

Q. That was done in 1838?

A. Yes, sir, I think the last I assisted at the machine must have been in the winter of 1837 & '38; it might have been in the spring of 1838.

Q. In your judgment, what effect do solvents have upon rubber? do they make it better or worse when applied in any amount?

A. There have been so many various kinds of solvents that I hardly know how to answer that question. If you go back to goods in regard to which I before stated that I thought a gallon was required to a pound of rubber, I can answer in one way; but where a small quantity is used, I can answer in another.

Q. What will be the effect of using a gallon to a pound upon the quality of the goods?

A. There was great difficulty at that time in making goods that we could depend upon to stand. Some would fail in a month, become soft and tacky, and the seams would fall apart from the rotting, apparently, of the rubber, and some would stand six months and give way at last. We could not depend upon any thing; whatever the cause was that was the effect.

Q. Didn't the quality increase in proportion as you decreased the solvent?

A. Yes, sir.

Q. In 1834, when you first went to the factory, did Chaffee have a room that he kept by himself for the purpose of experiments?

A. Some time in that winter of 1834 or '5, according to my understanding, there was some improvement making, and Chaffee had a room; and I understood him to be in that room which was used for some purpose. I never was in the room to see what he was doing. I only understood that there was something new coming up.

Q. It was kept secret what was doing?

A. Yes, sir.

Q. Did he have that private room when you went there in the fall of 1834?

A. I do not know but he had; of course, I do not know what he had before I went there. I know some time in that winter there was some inkling that there was something producing.

Q. How long he had had the room you do not know?

A. I do not know!

Q. Do you know where the original monster machine was built?

A. I understood that the castings—

Q. Do you know?

A. I do not know.

Q. When did you first see the castings?

A. I think some time in the summer of 1835.

Q. In what room were those castings when you first saw them?

A. I first saw them on the ground outside of the building.

Q. You fix that as being in the summer of 1835?

A. I think it was; I have no means of being positive.

Q. There you saw the castings of the monster machine?

A. Yes, sir, what I afterwards ascertained to be portions of it, when I came to see it.

Q. Did you, in 1835, learn or hear of the fact that Chaffee had made a discovery of a method of softening rubber and spreading it without a solvent? (Objected to as hearsay; objection overruled; exception taken.)

Q. Had you given a bond that you would not disclose any thing that was going on—any new discovery?

A. I gave a bond while I was there. I do not remember a word of it.

Q. Do you remember its purport?

A. It was to keep the secrets of the concern.

Q. State the first date you recollect when you heard of the discovery of a method of spreading rubber without the use of solvents, in or about the premises, in the course of your business—not what you heard elsewhere.

A. I shall be obliged to use conjecture as to the dates; it is impossible to remember particular dates.

Q. As near as you can determine, the earliest time or the latest?

A. I think it must have been in the early part of 1835. I heard from various quarters—probably from Chaffee himself—I do not know who or how.

Q. From people there in the factory?

A. People there in the factory, that Chaffee had made a discovery whereby he was to save 80 per cent. of the solvent.

Q. That you heard the first of the year of 1835?

A. I think it must have been about that time.

By Mr. BRADLEY. Do you mean the early part of the year?

A. The early part of the year.

Q. When did you first hear of dispensing entirely with solvents there?

A. I am not positive that I knew of solvents being dispensed with entirely until I saw the machine. I do not recollect any proof I have of that.

Q. That was in the summer of 1835; at what time in the summer?

A. I have stated that time as nearly as I can recollect once already.

The COURT (to the witness). You stated when you first knew of the productions, but you did not state, I believe, when you first saw the machine.

Q. When did you first see the machine?

A. It must have been, I think, in March, '35.

Q. Was it then in running order?

A. It was then in operation.

Q. Do you know how long it had been in operation when you first saw it?

A. I do not precisely know, but it must have been some time. It was some time that I had seen the goods.

Q. Why hadn't you seen it if it had been put up previous to March, and you were there in the factory?

A. It was understood to be a secret, and, therefore, I never saw it. I had no great curiosity to see it.

Q. Did you belong to that department of the business?

A. Not at all.

Q. What was your business in the factory?

A. To take charge of the manufacture of shoes only.

Q. You took the cloth after it was spread?

A. Yes, sir.

Q. And had nothing to do with the original preparing of it?

A. I cut, and had charge of putting it together.

Q. Was it in the same building you were employed in?

A. It was not.

Q. Were the hands in your department permitted to go into the preparing department, or were they excluded?

A. They were excluded, as I suppose, except those that gave bonds. I did not consider my bonds sufficient to carry me into that department, and under that impression I did not go in. Who went in besides I cannot tell. Of course, some were admitted.

Q. Were there any efforts made, to your knowledge, to ascertain what new thing was going on there at that time, from other factories outside of that concern?

A. I do not know that I recollect any that came within my knowledge. I do not know what might have been going on. I do not know that I am conversant with any, at that stage of the business.

Q. At what stage?

A. The stage of Chaffee's invention.

Q. That is before you saw it?

A. Aye.

Q. Did you know of any afterwards?

A. I do not know that I recollect of any.

Cross-examined by Mr. Bradley.

Q. Were you employed in any other factory, except at Roxbury, until you came to Providence?

A. I made some experiments in a factory at Lynn. I could not say I was employed there. I was there, at my own request. I got the privilege of making some experiments prior to going to Roxbury.

Q. You knew nothing of Millard or his works in Providence till after that time?

A. No, sir.

Q. Did you know any thing of Mr. Hoyt or his experiments at Boston or Roxbury while you were there?

A. Both these names seem familiar to me; but I have no recollection of their experiments.

Q. Did you go into the Pitt st. factory?

A. Never.

Q. Ever go to Troy into the establishment there?

A. No, sir.

Q. At Staten Island?

A. No, sir.

Q. At New Brunswick?

A. Not as early as that.

Q. Then your knowledge at that time was from what was known and done at Roxbury?

A. Yes, sir; except a little knowledge I had at Lynn.

Q. You were all jealous of one another; was that the fact of the case?

A. The first I knew of any jealousy was that I went to Roxbury; there were some jealousies came up among certain portions of the hands, particularly in my line.

Q. Was the rubber that you made at Roxbury put between the two coatings or sheets of cloth?

A. That was my practice.

Q. State why the rubber was put between the cloth?

A. So far as I was concerned, I considered that the best mode of using it at the time.

Q. Suppose you put rubber on the outside of the cloth, and put nothing with it at all—no composition; what would be the effect upon that rubber exposed to the air, sun, &c.?

A. At that stage of the rubber business, it would have been almost a useless article, as I suppose.

Q. Rubber simply rolled upon cloth would have been an almost useless article?

A. I so consider it.

Q. You spoke of some shoes of sheet rubber made at Roxbury, did you?

A. Yes, sir.

Q. Did you know of a quantity of those shoes being brought on here for sale, and what their character and condition were when Chas. Jackson brought them here?

A. We made some very poor shoes, I know; I do not know what became of them; they were the first experiments in making rubber shoes.

Q. Do you know of a whole lot being bought and brought here, and sold at auction?

A. I have no particular knowledge of the sale here, or the consequences of that sale; but I can only say they were very poor.

Q. You spoke about getting a machine at Lynn in 1838, composed of cylinders, for spreading cloth; and you also spoke of another machine, a kind of mill, for preparing the rubber; do you understand that that mill is a part of Atkinson's machine?

A. I do not find it in Atkinson's patent; but I stated that the spreading rollers, as they were termed, were Atkinson's machine, as I understood it, by reading.

Q. Then that which was Atkinson's was not the preparing part, which failed, but this spreading machine?

A. The spreading machine is all I can find in his patent.

Q. You stated that for that you made a couple of rollers; is that (small model) the kind of machine you got up here first as to rollers?

A. Yes, sir, as to rollers.

Q. Then afterwards you got up some further rollers, and heated them?

A. I did.

Q. Well, you didn't make them any heavier, and you used some solvent; with these rollers you used a pint, and afterwards you used less, and you regulated the amount of solvent by the power of the machinery, and were regulated in getting up machinery by the expense of solvents?

A. Yes, sir; do you ask me the question if the second machinery was built heavier or lighter?

Q. Yes, sir.

A. They were a little heavier, and heated.

Q. As you made them heavier, you used less solvent?

A. Yes, sir, I should think so; I do not know as it made much alteration in the solvent at that time.

Q. That is your experience—that the solvent varied with the power of the machine?

A. Yes, sir.

Q. To go back to Roxbury: was there or was there not another machine by the side of the monster, for grinding like this (small model)?

A. There was a small machine I found in use there when I first became acquainted with the monster machine, with one roller running against a solid plate of iron. The rubber was placed between that roller and the iron, dry; and that worked it up into something of the appearance of sponge, finer than that (pointing to a lump of rubber of a spongy appearance).

Q. Was there, in addition to that, another machine, in which they put the rubber, after it had been through that process, and made into a sponge?

A. There was a machine in another room, of smaller rollers—it seems to me there were three,—that was used some, and I think it was for working colors in partly, or for blacking.

Q. Did you see it yourself?

A. I saw it.

Q. Are you clear whether there were three or two rollers?

A. I am positive there were three.

Q. Now describe the monster as nearly as you can from this model; were there three rollers here (on the grinding part) or four?

A. My impression is—I cannot be positive—that when I assisted in working that machine there were three rollers, something like these. I never had charge of the machine, so that I paid very little attention to it; I felt but little interest in the part I was employed at occasionally.

Q. When you saw the castings, in the summer of 1835, were there four rollers or three?

A. They were detached portions that I saw in the machine afterwards.

Q. What portions did you see; three or four rollers?

A. I do not know that I could fix upon any rollers. I recollect seeing a

heavy casting; I should think either the frame-work of this or that (pointing to the rollers in the model).

Q. Can you describe how these various cylinders were geared together, and brought to bear upon one another?

A. Not precisely.

Q. How was it about those coloring bars?

A. They were there.

Q. Were they used in connection with that machine?

A. Yes, sir.

Q. How long did they work with the machine, and how did they work?

A. I think they were there as long as I had any acquaintance with them; I think the bars remained in them; I recollect seeing these screws worked, whatever I did with this machine.

Q. With whom were you employed when you came to Providence?

A. By Charles Jackson; he was the owner, as I understood it, and managed the matter here.

Q. Who succeeded him?

A. Dr. Hartshorn.

Q. Did these little rollers get heated when you worked there or not?

A. I think they did; we did but little with them while I remained there.

Q. Does the rubber follow the fast or the slow roller in spreading?

A. It can be done either way.

Q. I mean where the rubber goes between a couple of rollers, which does it follow?

A. From my experience in all my machinery that I have had, the rollers were equal.

Q. I believe you had unequal rollers?

A. In speaking of unequal rollers, I allude to the preparing rollers.

Q. I ask you as to the fact; if you have had no experience?

A. I have assisted in trying it as an experiment.

Q. Which does it follow?

A. In the experiment that I saw tried, it was tried in various ways to see the product.

Q. How does that fact appear upon a single experiment, as to which cylinder takes the rubber—the fast or the slow?

A. In answering that, I would like to have the product of that experiment; then I could give my opinion as to which was best.

Q. All I want is the simple fact, if you know it?

A. If I am not mistaken, my attention has been called to that by some experiments; about a product of that, I might be mistaken; but I think it is the slow roller on the rubber side, and the faster roller on the cloth side that produces the best effect.

Q. My question is this: take a sheet of rubber and put it through a couple of rollers, one going faster than the other; which roller takes the rubber—the slow or the fast roller?

A. I am inclined to think it would go around the fast roll, as a general thing; I do not think it would always be the case.

Q. I ask you as an expert, if you have been in the habit of putting rubber through rollers?

A. I have.

Q. Then, what is the fact as shown by that practice?

A. I do not think it could be settled that it should always go upon one roll or the other.

Q. Which is the general practice?

A. I should think it would go generally on the faster roll.

Direct resumed by Mr. Richardson.

Q. You said something about some bad shoes you made; were they made with solvents?

A. In the course of the experiments, before we had arrived at a manner of

making them—before we knew what the stock could produce, all the shoes were made up under Mr. Goodyear's directions then, and I assisted in the experiments. They were some of my own, and some of his, probably; but it was when I was there, and we did not know enough of the stock or the manner of arranging the stock. There was a considerable quantity of them made; what became of them finally I do not know.

Q. Were these some of the shoes you referred to as making three hundred pairs a day?

A. No, sir.

Q. (By Mr. BRADLEY.) These three hundred pairs a day were made with cloth on both sides of the rubber?

A. Yes, sir.

Q. (By Mr. RICHARDSON.) Were these good or bad ones?

A. Good ones.

WILLIAM HENRY BURR, SWORN AND EXAMINED BY MR.
RICHARDSON.

Q. What is your business?

A. I am a reporter.

Q. Were you present when Dr. Hartshorn testified in New York?

A. I was present.

Q. Are these your notes? (handing him a report of the trial.)

A. This is my handwriting—my original manuscript of the examination.

Q. (By Mr. BRADY.) From your stenographic or phonographic notes?

A. Either—phonography more properly.

Q. State whether Dr. Hartshorn was inquired of there in reference to the Chaffee machine or machines in his factory; state from your own recollection, after looking at your notes.

Mr. BRADY proposed to let the counsel read all of Dr. Hartshorn's testimony.

Mr. RICHARDSON. You are exceedingly liberal; we have no idea of reading all Dr. Hartshorn said.

WITNESS. I have a very distinct recollection that the questions to which you called my attention were asked of Dr. Hartshorn and answered in this way.

Q. Was he inquired of in relation to the machines in his factory?

A. He was inquired of in relation to those machines.

Q. Was he asked, in your presence, by a jurymen, whether all these machines were Chaffee machines?

Objected to as a part of the infringement which ought to have been put in before the plaintiff rested his case.

Objection overruled and question allowed, to show how the machinery operated.

Q. What was Dr. Hartshorn's answer to that question?

A. His answer was, "They are called Chaffee machines."

Q. Was there another question put by the same juror?

A. There was another question.

Q. What was that question?

A. If he understood the patent.

Q. What was his answer?

A. "Not perfectly."

Q. What was the next question?

A. "Are they according to the specifications?"

Q. Was that put by a juror?

A. It was put by the same juror.

Q. What answer did Dr. Hartshorn give to that?

A. "Not exactly, but they come under that patent."

Cross-examined by Mr. Brady.

Q. You have been asked about some juror asking some questions; was that the foreman of the jury?

A. I do not know what the name of the foreman was.

Q. He was the man who talked most?

A. I know there was one man who talked the most, but I have not yet learned that he was foreman.

The COURT. What consequence is that?

Q. You copied this from your original notes, taken in the same way as you have done here?

A. From my original notes.

Q. And at the request of Mr. Day?

A. I was employed by him for that purpose.

Q. And this is a correct report of the testimony which Dr. Hartshorn gave on that occasion?

A. That is verbatim.

Q. He was called by the New England Car Spring Co.?

A. He was.

Q. And was cross-examined by Mr. Richardson, beginning at page 427?

A. Cross-examined by Mr. Richardson.

Mr. BRADY wished to read all of Dr. Hartshorn's testimony.

The COURT allowed only that part to be put in which related to what had already been inquired of.

Adjourned.

SIXTEENTH DAY.

PROVIDENCE, *Monday, Feb. 12, 1855.*

TESTIMONY OF G. O. BOURN AND DURANT.

A communication was received from the absent juror, Mr. Gardner, stating that he had been growing worse since Thursday night last, and could not tell when he would be able to return to court.

The COUNSEL for the plaintiff was willing to go on with eleven.

The COUNSEL for the defendants stated that by the stringent technical objections presented by the other side, the defendants had been deprived of certain testimony, particularly the testimony of Mr. Stone, which they all considered very decisive testimony.

The COURT. How would you be better off in regard to that witness at a future time?

Mr. BRADY. By giving new notice and bringing him within 30 days.

Mr. RICHARDSON. They may put it in at any time during this trial; we will waive the notice required.

Mr. BRADLEY wished to introduce another witness besides Mr. Stone, to prove the same fact.

Mr. RICHARDSON. Certainly.

It was accordingly understood that the case should go on, and a verdict should be taken with the eleven jurors, unless the 12th juror should be able to attend hereafter, in which case the testimony was to be read to him.

Mr. BRADY, by permission from the Court, introduced in evidence, on the part of the defence, the following papers, which were not objected to:

An agreement dated August 28, 1848, between Mr. Chaffee and Dr. Hartshorn, by which Mr. Chaffee was to furnish Dr. Hartshorn with all information in his possession in relation to the preparation and manufacture of rubber boots and shoes, for certain sums of money named.

An agreement on the back of the aforesaid paper of the same date, between the same parties, in which Mr. Chaffee agrees to furnish Dr. Hartshorn with testimony in any suit brought against him.

A revocation by Mr. Goodyear to Mr. Judson, of the power of attorney, conferred July 1st, 1848, as authority to act in his behalf, dated March 30, 1853.

Also the following paper which was objected to, and taken *de bene*.

A release, dated August 13th, 1853, from Mr. Judson to Dr. Hartshorn and Mr. Hayward, of any right of action for infringement up to that time, which Mr. Judson may have had.

GEO. O. BOURN [SWORN AND EXAMINED BY MR. RICHARD-
SON.

- Q. Do you reside in Providence?
A. I do.
Q. How long have you resided here?
A. About 30 years.
Q. How long have you been in the India rubber business?
A. Since 1840.
Q. Where did you commence? what part of the city?
A. In Green street.
Q. Who was with you?
A. David L. Winalow.
Q. When you commenced the India rubber manufacture, what machinery did you use, or did you or not use solvents?
A. We used solvents.
Q. When did you cease the use of solvents?
A. As soon as we commenced heating our shoes.
Q. When was that?
A. We dispensed with solvents in part; we had at various times. When I went into the business in 1840, we used a great deal of solvents, and I partly abandoned the business from 1840 to 1845; then we took hold of it again, and we used less solvents than than we had the first time. We continued to use less till, I think, about 1847, when we dispensed with pretty much the whole. We found that our gum was much better without than with solvents.
Q. You made what is called the Providence shoes?
A. We did.
Q. They were always made with solvents?
A. Always made with solvents.
Q. When you commenced the heating process you dispensed with solvents entirely?
A. Yes, sir.
Q. Are you manufacturing now?
A. We are.
Q. And have been for the last few years?
A. We have.
Q. How long where you are now?
A. Since 1845.
Q. Do you make now what is called the vulcanized shoe?
A. We make a shoe that we heat.
Q. Do you use any solvents now?
A. We do not.
Q. Do you use coal tar?
A. We do.
Q. How much to a batch of rubber?
A. I do not know that I understand your meaning; do you mean a batch of rubber alone or with the compound?
Q. Either.
A. With 12 pounds of rubber we generally put about as much more compound, making about 25 pounds.
Q. How much coal-tar do you put to that?
A. We put about a pint—sometimes from half a pint to a pint.
Q. What is that used for?
A. To give a smooth surface to the rubber, and prevent its blooming as it is termed.
Q. To prevent its blooming?
A. That is the object, and it brings out a bright color on the surface of the rubber after it is heated.

- Q. Do you know of other people who use that in the business?
- A. I do.
- Q. (By the Court.) What is blooming?
- A. Little pimples upon the surface of a sheet.
- Q. How does it affect the color of the rubber?
- A. It brings out a bright color when heated.
- Q. Is there any thing to be seen—either sulphur or lead, on the outside of the rubber after it is finished without coal-tar or some substitute for it?
- A. There is, very often.
- Q. Do you know what that arises from?
- A. The white surface. Various causes in the compounds, and coal-tar is what we consider a preventive.
- Q. When do you put coal-tar in? after you have ground the rubber or before?
- A. After.
- Q. You mix it with the compound afterwards?
- A. We grind the rubber, as we term it, through a two-roll machine, throw it on a bench, and then another man takes it to another, what is termed, a mixing mill, and puts in with a mixture of coal-tar.
- Q. I believe I inquired if you knew any thing about the use of coal-tar in the trade at other places than your own factory?
- A. I could not say what is done in other factories definitely; I could pronounce that there was coal-tar in that piece (pointing to a lump of rubber,) but I never saw it go in; the smell is very much as though it had gone in. I know we use it in another factory that we have.
- Q. For the same purpose?
- A. Yes, sir.
- Q. Did you ever know coal-tar used in the manufacture of rubber shoes as a solvent?
- A. I never did—never heard of it before.
- Q. Would a pint, the amount you use to a batch, if applied to the rubber at the time of grinding it on the heated roller, operate as a solvent at all?
- A. It would not; it would operate something like this: we should not be able to do near so much work. The rubber would not grind half as quickly; it would not mix half as quickly. That has been the complaint of our hands very often,—that if we could contrive something to do away with this little tar, they could mix much more than they do—that they could mix in ten hours something like fifteen or twenty pounds more.
- Q. Have you ever been in Dr. Hartshorn's factory?
- A. Not of late years.
- Q. Do you use friction rollers in grinding the rubber?
- A. We do.
- Q. Like this? (small model).
- A. Yes, sir, similar to that.
- Q. Have you ever seen the monster machine?
- A. Yes, sir, I saw it several years ago—as early as 1849.
- Q. How large are the rollers for grinding in your factory?
- A. Either twelve and a half or thirteen inches.
- Q. In running these rollers heated by steam, can you grind rubber without having any cold water cooling apparatus?
- A. Surely we can.
- Q. Do you ever find with that size roller any difficulty in grinding without the cooling part?
- A. No, sir.
- Q. What is the convenience, if any, of having an apparatus for letting in cold water?
- A. It is necessary to heat these rollers every morning when the hands go into the room; sometimes the hands step one side, and they are apt to get too hot. It requires a certain degree of heat for the rubber to run through, and if you get them too hot or too cold your rubber is bad. If we have a cooling ap-

paratus it is easy to turn on water and cool them at once, whereas we should have to wait half an hour, and perhaps an hour for them to cool, which has been found to be a great inconvenience.

Q. If the rollers were as large as in the Chaffee monster machine, what would be the effect?—would they, on any occasion, heat too much?

A. Do you mean, would the steam heat them too much?

Q. Would they heat too much by friction?—go above two hundred degrees, so that you could not control them?

A. They would not heat of themselves; it would be impossible; you could not heat these rollers by friction, according to my experience, in half a day, let them run as quick as the shafting runs, making one revolution in about a minute and a half, and that machinery never made a revolution in less than a minute and a half.

Q. Are the grinding rollers smaller than those in the original Chaffee machine?

A. Ours are twelve and a half or thirteen inches.

Q. You recollect those in the Chaffee machine?

A. I could not bring that to mind; I merely saw it a great many years ago in the Roxbury factory, and could not say any thing about it.

Q. By proper care and attention to your machinery, can you keep them at work by letting the steam off and keeping them down to two hundred degrees, without any water?

A. We keep letting in steam at ours; probably we have to let on the steam once an hour, certainly, if not oftener, when we are grinding.

Q. Could you not keep the temperature of the rollers down without cold water?

A. O yes; you could be there at the precise time when there was the right degree of heat, and then shut off the steam.

Q. Then the difficulty arises from the want of attention to it?

A. Most generally; the hands employed to run these machines are not such men as are always reliable, who can be there at the precise time.

Q. The smaller the rollers the hotter they get, I suppose, from friction?

A. Yes, sir, if they run quick.

Q. With the same speed, what would be the effect upon a small and large roller?

A. There would be no difference with the same degree of speed on the surface.

Q. Would the large roller heat as quick as the small?

A. It would not, because the surface is larger.

Q. A word as to the quality of turpentine goods; how are they?—are they good or bad?

A. It is dependent upon what is going to be done with them.

Q. Take shoes.

A. In the manner we use them now?

Q. Yes, sir.

A. Good for nothing.

Q. Vulcanized shoes, as they are called?

A. They are good for nothing; they have proved to be so.

Q. Can the present article of what they call vulcanized rubber shoes be made with solvents?

A. I should think not—not to any warrantable extent.

Q. Do you know of any place in the United States where they are made with solvents?

A. I do not; that is, I have not known of any since 1847; we abandoned it in that year.

Q. Precisely, when did the new process of vulcanizing shoes come into vogue?

A. I cannot recollect whether it was in 1847 or '48; at any rate it was about the time all the rubber factories exploded, when they lost all their shoes.

Q. Why did they lose their shoes?

A. On account of the camphene they put in them; when they vulcanized them that soon decomposed them.

Q. Are there any goods that are as good, made with solvents, as made by the Chaffee process without solvents?

A. I should think not.

Q. How is it as to the expense of manufacturing, between the solvent and the Chaffee process?—Does the Chaffee process save any amount?

A. If you will refer to some particular time—

Q. Take your first experience, before the Chaffee process was known.

Objected to as testimony that should have been put in in the opening.

Objection overruled, inasmuch as the validity had been attacked upon the ground that it was of no use without the vulcanizing process.

Q. Is the Chaffee process a saving in any thing over the solvent process?

A. Do you confine the question to any time?

Q. Before the Chaffee invention—or at any time when solvents were used.

A. When I commenced using solvents in 1840, we used to put up our gum in 40 pound batches, and we put in 20 gallons of spirits in it.

Q. Is there any saving by this process over that?

A. We save all the spirits and a great deal of labor in grinding the rubber; we can grind raw rubber a great deal quicker than this soft, sticky stuff.

Cross-examined by Mr. Bradley.

Q. What kind of machinery did you use in 1840?

A. Similar to this (small model) geared even so as to go with an even motion—no steam nor water—with a doctor on the backside to scrape off the rubber when it was ran through.

Q. How long did you continue to use 20 gallons of spirits to a 40 pound batch?

A. All the time I was in Green street—which was two or three years.

Q. How much did you use after 1840?

A. After we came to the Dorance street factory, where I am now, we used a great deal less; I think it was in 1845 we commenced in Dorance street.

Q. How much less?

A. We put up 16 pound batches and used to put in 4 gallons.

Q. How much more did you reduce it after that, if at all, and when?

A. We kept reducing it as fast as possible; we found it very expensive.

Q. How low did you reduce it?

A. I do not think we ever used much less than that, as long as we were making what is termed the old Providence shoe, which was made at the City Rubber Works.

Q. Was that a vulcanized shoe?

A. No, sir; it was cured in acids.

Q. You had some controversy, I believe, with the present defendant about that matter—you were sued by Dr. Hartshorn for making them under the Goodyear patent, were you not?

A. We were.

Q. What time was that?

A. I do not know; I could tell if I had some depositions I have at home.

Q. About when was the verdict against you as near as you can recollect?—was it about 1848?

A. 1848 or 50.

Q. Did I understand you to say that this coal-tar does not operate as a solvent?

A. I said it didn't, but I do not know how you understood me.

Q. Did you mean to say it?

A. Yes, sir.

Q. You mean to say that if you put a piece of rubber in coal-tar it does not soften?

A. I said this; that we ground our rubber in the first place and put our solvents in with the compound, but we did not put it in as a solvent.

Q. You put solvents in but didn't use them as a solvent; didn't they work as a solvent?

A. It does not.

Q. That you mean to say?

A. I do mean to say so.

Q. That the solvent put in does not work as a solvent?

A. Not in our opinion.

Q. How many machines have you got for grinding? Are there any that have a cooling apparatus annexed to them?

A. We have five, all with a cooling apparatus.

Q. How long have you had a cooling apparatus connected with them?

A. We put up a cooling apparatus after we dispensed with the spirits—camphene and turpentine.

Q. Then as soon as you began to grind the rubber without a solvent you at once put on the cold water apparatus?

A. I do not think you understood me; I said when we put on the steam in the morning, one roller was very apt to get hotter than the other, so that if you should get the roller up to 200 degrees and then the man should go off and leave them running, it would burn the rubber and destroy it; it would be of no use whatever, so we use a cooling apparatus to cool them down to the right temperature.

Q. If you don't have the cooling apparatus, you run a risk of having your rubber catch fire?

A. No, sir; it burns up, as we call it, so that it is of no use.

Q. You have this cold water apparatus, and have had it ever since you have dispensed with the use of solvents, to avoid that burning up?

A. If you put the rubber in while the steam is hot. We do not mean to put the steam on when these rollers are over a certain degree of temperature.

Q. Still, in carrying on the business with such men as you have, is it, or is it not, safe to do without the cooling apparatus?

A. We have adopted that plan in order to save time. As to whether it is safe, it is not safe to employ any person about our establishment that would injure our property, and some workmen are more judicious than others.

Q. Your cylinders revolve with an unequal motion?

A. They do.

Q. Is Mr. Chaffee connected with you in the establishment?

A. He is.

Q. When was he admitted into your business?

A. In 1851, I think.

Q. You say you are making the heated shoe; have you been prosecuted for making that shoe by Mr. Goodyear at any time?

A. We had one or two processes served upon us and withdrawn.

Q. Have your copartners been sued in New York?

A. Yes, sir; I believe they were sued, and some goods were taken that belonged to us, which I think have been replevined since, and the suits have been cancelled.

Q. Was a suit commenced against you in Rhode Island, on the 30th of April, 1853, in this district and this court?

A. There might have been; there are so many rubber suits that I can hardly keep the run of them.

Q. Have you any doubt as to the fact?—don't you know?

A. There might have been; I cannot say any thing about the time; I think there was one commenced in that summer, but I never heard any thing more about them. There was a little process left at our place, and I never heard of it afterwards.

Q. Do you know whether Chaffee was sued also in connection with it at a later time?

A. I do not know.

Q. Did you ever so understand from Chaffee?

A. I cannot say positively.

Q. Was he not made a party?

Mr. RICHARDSON. That is a matter of record.

A. You can tell better than I; I can state what I know if the judge and jury desire it.

The COURT. If the counsel asks a question, I suppose he wants an answer.

A. I recollect seeing a letter from Leverett Candee and Mr. Judson, telling Mr. Chaffee that if he would withdraw from this concern, and would do certain things—I do not know what they were—they would not sue him; whether he was sued or not I cannot tell. At any rate, I recollect about the letter; it struck me very forcibly at the time, and was a good deal amusing.

Q. You mean to say that you have no recollection that Chaffee was sued in connection with you for a violation of the vulcanizing process?

A. It might have been, and might not.

Q. Do you recollect when he was sued in New York?

A. I do not; I was out of the country at the time it was commenced. I never had anything to do with it. I was in Canada at the time, and was there when it ended.

Q. Have you ever had a license from the Shoe Associates?

A. I have a license from Chas. Goodyear.

Q. Have you a license from the Shoe Associates?

A. We have a license—what I suppose you would call a license.

Q. We want the fact; state it just as it is.

A. There is a certain obligation, and if it is necessary for me to state what it is, I will do so.

By the COURT. You know who the Shoe Associates are?

A. What are termed the Shoe Associates—the four.

By the COURT. Have you a license from them?

A. Not a direct license.

Q. Have you any?

A. We have certain papers that some folks pronounce a license; whether they are or not is a matter of law—I can't tell you.

Q. Have you any paper signed by anybody but Goodyear?

A. Yes, sir.

Q. What is it?

A. I have not got them with me.

Q. Who signed them?

A. I think three of the associates.

Q. Will you produce the papers?

A. I don't know where they are; I have not seen them for two or three years.

Q. Do you know how this vulcanizing business is carried on in any factory except your own, in this country, of your own knowledge?

A. It would be impossible almost for me to know about what I have not been admitted to see; I could guess and surmise.

Q. I ask you whether you know or do not?

A. I do not.

Q. Did I understand you to say that shoes were made anywhere with a solvent?

A. I should not think they were.

Q. That is mere opinion?

A. That is my opinion; I have proof from the men who ground the rubber.

Q. That is what you have heard?

A. Yes, sir.

Q. You do not know any thing about the process anywhere else except from what you have heard?

A. That is my meaning. I could tell very quickly whether a shoe was made of camphens or not.

Q. You could tell whether it was made with coal-tar or not?

A. Yes, sir; I think I could.

Q. You could tell whether a piece of rubber had coal-tar in it?

A. No, sir; I could tell only by the smell; I could not tell by analyzing it.

Q. Could you tell in any way?

A. I could tell by the smell.

Q. There is a piece in front of you; is there coal-tar in it or not?

A. I would not pronounce that coal-tar is in that; my head is very much stopped up with a cold, but there is no appearance of it.

Q. Didn't you state that there was lampblack in there?

A. I did not say any thing about it; I do not recollect of so stating.

Q. Lampblack or coal-tar?

A. I have no knowledge of it.

The Court. I understood him to state that there was lampblack in that piece.

Mr. BRADLEY. I thought he took up that piece and said there was lampblack in it.

WITNESS. I do now say that there is no lampblack or coal-tar in it; it is a piece of raw gum, which has gone through the grinding machine; almost any rubber man could tell that.

Q. Do you know that there is a motion now pending for an injunction against your firm, or some members of it, and Mr. Chaffee, in New York?

A. No, sir; I do not. As I said in the first place, I cannot tell. Some parties commence a suit without any provocation whatever, and we don't know any thing about it; we go over in Massachusetts and some body may commence a suit.

Q. You mean to say you do not know that such a motion has been argued by Mr. Richardson in New York?

A. He may have argued in such a case. I told you I had been in Canada, and was there from the commencement till the termination of this suit. I understood that Judge Betts or Nelson had decided against the motion.

Q. Who told you so?

A. I think it was Chaffee, or some member of our firm.

Q. Do you know whether there is a suit pending at this present time against you?

A. Upon honor I do not; I am not aware of it.

Q. You say you can tell whether shoes are made with camphene or not?

A. No, sir; I do not say so.

Q. Didn't I understand you to say you could tell by the smell, whether they were made of camphene or not?

A. I think not.

Q. Can you tell when they have coal-tar?

A. I think I can when my head is clear; it is not clear to-day. Almost any one can tell when they come inside of our factory, whether there is coal-tar used, or Dr. Hartshorn's either.

Q. What effect has camphene upon the surface of the shoe?

A. The shoes we are making now we do not use it in at all.

Q. I ask you what is the effect of it *when* used, upon the rubber?

A. The rubber eventually decomposes; it will commence decomposing in about nine months after it is made. It is considered very dangerous to make shoes with camphene by our people. The rubber will begin to decompose most generally on the quarter of the shoe betwixt the stiffenings. It will be apparently rotten. I have seen these shoes so rotten that you could not lift them up.

Q. How much camphene was there in the rubber of these shoes?

A. I could not tell you.

Q. How much do you mean to state will produce that effect in your judgment?

A. Very little.

Q. How much camphene?

A. I could not say precisely; we have not tried it.

Q. You have some idea what you mean by very little; what is that idea?

A. I should not dare to say at all.

Q. Can't you state how much you are willing to say, as matter of opinion, if not as matter of fact?

A. I have not used it in so long a time, that I should not be willing to use it in any other way than for experiment. I should not be willing to try; I could not say.

Q. Take the same amount that you use of coal-tar in your business; what effect would it produce?

A. According to my ideas it would have a different effect from what coal-tar would have altogether. One is put in for one purpose, and one for another.

Q. Do you mean to say that camphene produces a different effect from coal-tar?

A. I say it is put in for a different purpose.

Q. Do you mean to say that coal-tar would have the effect to rot the shoe?

A. In accordance with the quantity you put in the more rotten it would be; for instance, from a drop to a gallon.

Q. Now, put into your batch the same amount of camphene you put of coal-tar; what would be the effect?

A. I have already stated we do not know because we have not used it. I said this: we put in camphene for one purpose when we did use it, and coal-tar for another purpose.

Q. When did you put in camphene, and when did you give it up?

A. When we commenced heating shoes, in 1851, probably, some time.

Q. Did you introduce coal-tar in the place of camphene immediately?

A. We never used any camphene; we use coal-tar constantly.

Q. You used camphene up to the time when you commenced vulcanizing, didn't you? I ask you when you gave up camphene and took coal-tar?

A. When we gave up camphene gum we used compounds of various kinds, which I will designate if necessary, as well as all the different processes.

Q. Camphene gum is one thing, and this compound gum is another; now when you took that compound gum did you introduce coal-tar?

A. We do. We use coal-tar with our compound.

Q. What other things do you use with the rubber besides coal-tar?

A. We use considerable whiting.

Q. What is that?

A. We use lead, and sometimes other substances with it.

Q. What else has a similar effect to whiting?

A. Litharge.

Q. What is lead?

A. A substance that answers as a drier.

Q. Do you make any rubber cloth in your factory?

A. Not to make a business of it.

Q. Do you use rubber cloths for any purpose?

A. We do.

Q. Do you use any solvent with the rubber?

A. Not very often.

Q. Do you ever?

A. We have not for these last two years.

Q. You have used no camphene for rubber covering cloth for the last two years?

A. I think not. We have not used it for the vulcanizing process.

Q. I want to know if, during that interval, you have or have not used camphene?

A. No, sir, not as a general use; only for something extra.

Q. Do you use it at all?

A. I say we might have used it in the time.

Q. How often?

A. I do not know. Sometimes a gentleman wants a piece of goods made for a certain purpose in this mode, for some kind of garment, and we make such goods as we think most appropriate for the purpose they are going to be applied to. So, then, we do not use camphene for general use about our establishment.

Q. Do you use camphene in the rubber that you spread upon cloth for the kind of business you are carrying on?

A. I believe we do not as a general business. There may have been cases where we used it.

Q. You mean to say that in your business of applying the rubber to cloth you do not generally use camphene; so I understand you to swear?

A. In our general business.

Q. In the general business of applying the rubber to cloth? I do not mean the shoe.

A. Probably you might understand it, or the jury might.

The Court. I think he has answered plainly enough, that in the general business they do not use it; but for some particular purposes they might do so.

Q. For shoe linings do you ever use it?

A. We do not use it for linings.

Mr. BRADLEY. We expect to contradict this witness in regard to the fact.

Direct resumed by Mr. Richardson.

Q. I will repeat the question I put to you before about coal-tar. If you put a pint of coal-tar into a batch of compound (25 pounds) while in process of grinding, would it operate as a solvent?

A. It would not operate at all as a solvent; it is only a hindrance for grinding rubber.

Q. You have been asked about a suit against you; did you have a subpoena served upon you when you were in New York as a witness in the case of the New England Car Spring Co.?

A. I did.

Q. You don't know what has become of the suit since?

A. I never heard any thing about the case since.

Q. You went to Canada?

A. I went off to Canada the next day.

Q. (Handing him a paper.) Is that a contract between Bourn and Brown and Chaffee and Mr. Goodyear?

A. This is one of the papers that we received from Mr. Goodyear, purporting to be a license, or in part a license.

Q. Is this, or any portion of it, in the handwriting of Goodyear?

A. The bottom part is his handwriting.

Mr. BRADY wished to cross-examine the witness before the gentleman offered this paper.

Cross-examined.

Q. Whose writing is that signature, Bourn & Brown?

A. That is my partner's, Capt. Brown.

Q. You were not present when it was executed?

A. I was present. This is Goodyear's writing and that is Capt. Brown's, and that is Chaffee's.

Q. He signed it at the same time in New Haven?

A. At the same time in New Haven.

Mr. RICHARDSON read the paper, in which Mr. Goodyear agrees to obtain a license for Bourn and Brown and Chaffee from the shoe associates, dated March 27, 1851.

Mr. BRADY objected to the introduction of the paper as immaterial evidence.

After some discussion,

The Court ruled the paper out, as it was connected with another controversy, the merits of which should not be gone into on this trial.

Direct continued by Mr. Richardson.

Q. (Handing witness a roll of rubber cloth.) Did you make make that in your factory?

A. I did.

- Q. When?
- A. I cannot say precisely what year; I think in 1849.
- Q. What is the material of that?
- A. This is pure gum.
- Q. Spread upon cloth?
- A. Yes, sir.
- Q. By what process?—was it ground and spread on?
- A. It was ground with our rolls.
- Q. Without solvents?
- A. Without solvents.
- Q. Has it ever decayed?
- A. No, sir.
- Q. It is perfectly sound now?
- A. This happened to be a piece we had left, that we were selling off the other day; it was made to spread upon beds in sickness; it is very thin and pure, and there is no smell to it.
- Q. No decay?
- A. I never saw any decay, and I have made a great many hundred yards of it.
- Q. Try it and see whether the gum is strong as it was originally on the edge?
- A. (Pulls it,) Here is a little lump of gum that happened to go through; that is as strong now as it ever was.

Re-cross-examined by Mr. Bradley.

- Q. What is this white stuff upon the surface?
- A. It is magnesia spread upon it; we have run it and rolled it up.
- Q. What did you put it on for?
- A. Merely to keep it from sticking together.
- Q. Suppose you should expose this cloth to the air and sun, without your magnesia, what would be the effect?
- A. In former times, in the room of the magnesia we used to sun all our goods to keep them from sticking together; in other words, we would roll them out on the earth, and let them remain several days, and then roll them up, and they would not be sticky.
- Q. At what time?
- A. From 1840 up to this period. In fact, it answers as a curer; it is one method of curing goods, as much as going through the vulcanizing process.
- Q. You make this sort of cloths of nothing but pure rubber you say; now if you undertake to air them as garments or carriage-cloths are aired, what is the effect?
- A. I never saw any bad effect from it.
- Q. Do you know of any good effect?
- A. I do—a very good effect; I had a coat cut from that very substance and wore it—I think I have got it now at my house. It was made some four or five years ago.
- Q. Nothing but rubber and cloth?
- A. Nothing but rubber and cloth.
- Q. Has that ever been carried on as a business, to your knowledge?
- A. I do not know what other people have done; we made a little lot of it to sell for this express purpose.
- Q. Have you carried it on as a business for making garments?
- A. Yes, sir; in 1849 or '50, at the time of the California fever, we made a great many tents—something like forty or fifty—and sent on there.
- Q. What became of them?
- A. I do not know; we got our money for them. We made water-pouches too.
- Q. You never had any orders for any more?
- A. I believe they did not use any kind of tents when they got out there.

Q. This white stuff you put on prevents its sticking?

A. At the time the rubber is green, we have to reel it out some little distance; a man stands and puts on this magnesia as we wind it up.

Q. (By Mr. RICHARDSON.) That is done instead of drying it?

A. Yes, sir; instead of carrying it out into the fields; we have no fields for drying.

CHARLES F. DURANT, SWORN AND EXAMINED BY MR.
RICHARDSON.

Q. Where do you reside?

A. Jersey City, New Jersey.

Q. Are you a chemist?

A. Somewhat. I practice it some.

Q. How long have you been giving your attention to chemistry?

A. From very early life, perhaps thirty years.

Q. Have you ever made any experiments on India rubber?

A. Many.

Q. How long have you been experimenting on India rubber—India rubber compounds?

A. I think as much as twenty-five or twenty-six years.

Q. Are you acquainted with the component parts of coal-tar?

A. I am.

Q. From what source do you form your information in relation to the component parts, from reading?

A. From reading.

Q. Have you ever made any experiments with coal-tar connected with India rubber?

A. I have.

Q. What are the component parts of coal-tar?—but first, give us the kinds of coal-tar that are known to exist in the arts.

A. There are many petroleums which some term coal-tar, because they are supposed to exude from coal in the earth, and which are collected in pits. I think, generally, the article known as coal-tar is that which is collected from the destructive distillation of coal in the formation of gas for lighting cities. There appears to be several varieties of that, and they are classed generally by the name of the coal from which they exude; they are generally classed as coming from common coal, and as from Cannel coal, and as from Boghead Cannel coal. Those are the three principal kinds that are known in the arts as coal-tar.

(When the answer was repeated to the witness in the form of an interrogatory, he further explained that common coal was common bituminous coal, as in all cases common coal is bituminous.)

Q. Is there in either of those three classes of coal any article which is a solvent of India rubber?

A. There is in each of those classes of coal an article which has been distilled, washed and prepared and used as a solvent for India rubber.

Q. What is it?

A. It is called naphtha, coal naphtha, in contradistinction from naphtha, generally.

Q. In the different classes of coal, what proportion of naphtha is found? state the several ingredients which make it up.

A. In what is termed the common coal, that is, coal other than Cannel and other than Boghead Cannel, and other perhaps than a new one we have which I saw last autumn at Cleveland, Ohio, which resembles Cannel, (but it will probably get another name) from common coal, according to one author of some considerable practice, we got of naphtha about 8 per cent., some 61 or 62 per cent. of what he calls a dead oil, and some 81 or 82 per cent., or enough to make up the 100, of mere crude resin or bitumen. From Cannel coal 90 per cent. of naphtha, somewhere about 60 per cent., perhaps still less, of dead oil, and 80, 81 or 82 (I don't recollect the exact proportion) of resin, enough however to make up the 100; and from Boghead Cannel coal, which has furnished the largest amount of naphtha that we know of from coal-tar, there is about 15 per cent. of naphtha and the balance made up of dead oil and bitumen, so that the average of common coal furnishes about 8 per cent. of naphtha, Cannel coal 9, and Boghead Cannel coal 15.

Q. Where is the Boghead Cannel coal procured?

A. From England.

Mr. BRADLEY wished to know whether the witness was stating the results of his own experiments, or what he had learned from books.

Witness said from both.

Mr. BRADLEY. Then when speaking from books name them.

Witness. The book perhaps which is the best authority for the amount of naphtha in coal-tar is *Dr. Ure's*. I have seen that and many other works they have not here, and which I have been trying to get. Ure's Dictionary of Arts, Mines and Manufactures, is the book I refer to; he is a very good authority on that subject: he gives the proportions which I have now stated here.

Mr. BRADLEY. You state from that dictionary.

A. Yes, sir.

Mr. RICHARDSON (resuming). Do you confine your knowledge to that entirely?

A. No, it is merely a book I have seen here. I could get no other, though I looked in the two libraries; there are many other works I might refer to on the subject, but I consider Ure as very good authority on that point. He also states in connection with another part of my testimony about its being used with rubber.

Q. You say that Boghead Cannel coal is procured somewhere in England?

A. Yes, sir.

Q. What was the next highest class?

A. Cannel.

Q. Where is that obtained?

A. In England. I saw a specimen of it here at Cleveland, Ohio, mined in Pennsylvania last autumn, and I understood they would probably get it at tide-water, so that it may have been here last winter. I only know of that coal from its look, and I should think it would furnish about nine per cent. of naphtha.

Q. How about the coal here?

A. I should think four per cent. would be a full average of the naphtha obtained from it.

Q. Is the dead oil in that coal a solvent for India rubber?

A. It is not, nor the bitumen either.

Q. The only solvent then is the three per cent. of naphtha?

A. That is the only solvent that I know of from what I have read in books, or as being used in practice.

Q. Will common coal-tar, without extracting any of those compounds, dissolve India rubber?

A. No, sir.

Q. Have you tried the experiments?

A. I have.

Q. Suppose you take ten pounds of India rubber, and ten per cent. of other articles, lead, &c., and compounding them together, run them over hot rollers, and at the same time and while the process is going on, apply a pint of common coal-tar, will it or will it not act on the rubber to dissolve it at all?

A. No, sir, it will not.

Q. Why not?

A. There would not be sufficient naphtha in a pint of coal-tar to dissolve ten per cent. of rubber or rubber compound. Naphtha is the only solvent used there, and again running it through rollers two or three minutes would not be sufficient to diffuse it through the mass, so as to enable it to dissolve the rubber.

Q. Would it any portion of it?

A. No, nor any portion of it. The naphtha, I think, would escape so soon as it began to act on the rubber from that heat.

Q. Suppose the rollers heated to two hundred degrees, which would be first thrown off the coal-tar?

A. Naphtha is the first thing that would go. There may be some other

materials a little more volatile, but naphtha would be the first thing to escape.

Q. If you take a pound of rubber, say, and cut it up and place it in coal-tar, and entirely submerge it and let it stand a day, would the naphtha dissolve the rubber?

A. It would not dissolve it, but it would soften a little of it, and that would depend on the quantity. Assume that a gallon of naphtha be necessary to dissolve one pound of rubber (such proportions have been used by Mackintosh and others, indeed I have used it myself, but I don't exactly recollect the proportion,) assuming that a gallon of naphtha is required to dissolve a pound of rubber, then allowing fifty per cent. of naphtha in coal-tar, twenty gallons of coal-tar would contain one gallon of naphtha,—hence twenty gallons of coal-tar to one pound of rubber would be sufficient to dissolve that pound, provided the naphtha could leave the bitumen entirely and go to the rubber, and it would take twenty gallons on that principle if it could all leave the bitumen and go to the rubber, to dissolve one pound of rubber.

Q. Would it all leave it?

A. It would not all leave it; but enough would leave it to go to the rubber and separate the molecules, and destroy it for any useful purpose, and make it valueless for use in the arts.

Q. How much naphtha from coal-tar does it take to dissolve one pound of rubber?

A. It takes one gallon or four quarts.

Q. In what state is it then when you say it is destroyed for any useful purpose?

A. The bitumen is left after the naphtha, in consequence of the naphtha separating the molecules or particles of the rubber,—a little softening enables this bitumen and other matter to get between the particles and that not being volatile, there is sufficient matter after the evaporation of the naphtha left between the particles acting like sand or worse, to prevent the particles from cohering together again, so that it has no strength to begin with; if you press it down it will undergo spontaneous decomposition thereafter, with the slightest expansion and contraction,—the expansion even under the ordinary atmosphere, the bitumen would tend to work to the surface like a splinter in the human flesh, and therefore cause what we call spontaneous decomposition.

Q. In the India rubber compound made of India rubber, lead, and sulphur, and a small quantity of coal-tar, what is the effect, chemically, of putting in that small quantity of coal-tar?

A. Small is very indefinite. Even a small amount tends in time to partial decomposition; yet it may be so little that that tendency to decomposition may be at first very small in amount, and be overruled by other chemical effects. A small amount of coal-tar in rubber, or rubber compounds, would leave the goods after covering, or indeed before covering, with a much blacker and more polished surface, and a more desirable appearance, so that in trade they would sell better; it also prevents discoloration. One of the effects in rubber in the process of working is termed burnishing. It is produced by carbonate of lead, exposed to the action of sulphuretted hydrogen (which gathers in privies and cesspools). That often occurs in goods that are vulcanized, and it is found that a small amount of coal-tar would prevent that, either by preventing the formation of sulphuretted hydrogen, or by itself forming a thin coat of coal-tar, that shuts out the action of sulphuretted hydrogen, if it should be formed. It has one other effect, one other advantage. In the use of vulcanizing goods there is what is called blooming by the workmen, where rubber goods have too much sulphur in their compounds—perhaps “too much” is not a good term—but when they have got more sulphur than is chemically combined with the rubber in the process, it will, like coal-tar, exude from the surface, from exposure to heat and cold, and from contractions and expansions of the atmosphere; in that way there will be produced a whitening of the surface, and it is known that a small portion of coal-tar will prevent that.

Q. What ingredients in the coal-tar operate to prevent that, is it the naphtha?

A. Not the naphtha at all, it is all gone, it must be the bitumen.

Q. Would rosin have the same effect?

A. It would, for rosin is a sort of bitumen; it is, properly speaking, dirt and bitumen together.

Q. For that purpose would the coal-tar be better with the naphtha taken out?

A. Decidedly better, and I have no doubt that a sensible workman would use it in that way, heating it up first to drive out the naphtha.

Q. What is the effect upon India rubber to dissolve it with naphtha or spirits of turpentine, as to the quantity of the India rubber afterwards?

A. After it has been dissolved with turpentine or naphtha?

Q. Yes, or any thing that will dissolve it.

A. The effect is to soften it; solvents are to soften it.

Q. As to its quality?

A. It depends very much on the purity of the article with which it has been dissolved or softened. If it is softened with what is generally known as spirits of turpentine, or even camphene, (for I don't think that in trade and commerce there is any difference in the articles, neither of them of what chemists term camphene,) or naphtha, just as found in the market, any of them would leave the goods subject to spontaneous decomposition after evaporation, and simply, because both the camphene and spirits of turpentine, or what are generally known as such in the market, contain a large portion of oxygen; in other words, the naphtha of coal-tar contains a portion of the coal-tar itself—or in other words, a portion of the bitumen; the spirits of turpentine or camphene contain a portion of the crude rosin, so that those articles that have been used in the rubber trade, as found in the market, leave behind them, after the pure spirits of naphtha has evaporated, a portion of this crude rosin, which tends to spontaneous decomposition, and sooner or later the goods will undergo that spontaneous decomposition.

Q. How much of this rosin do you get when you use a gallon of naphtha or spirits of turpentine to a pound of rubber?

A. I don't recollect, but enough to produce spontaneous decomposition.

Q. If you used a pint of coal-tar to the batch, would there be enough to produce that?

A. A pint to the batch contains the elements of spontaneous decomposition; but I think the beautiful color, and other advantages, would enable the manufacturer to sell his goods and have them worn out before spontaneous decomposition would set in.

Q. Suppose you used a gallon of naphtha or spirits of turpentine?

A. A gallon of spirits of turpentine, such as are known in commerce, would destroy those goods. It would leave them in a state that they would be subject to spontaneous decomposition.

Q. Do you understand the process, which is called in trade vulcanizing?

A. I understand it I think as well as it is understood by others.

Q. Can goods dissolved by spirits of turpentine and the compounds used in vulcanizing India rubber, be successfully vulcanized, and make goods that will wear?

A. No, sir; it will still be subject to spontaneous decomposition; and again, in another view, even in the process of vulcanizing it is liable to blistering, the spirits of turpentine that remain there will in the process come to the surface and blister the goods, by preventing the proper action of the sulphur. But even when vulcanized in that way, it is still subject to spontaneous decomposition.

Mr. BRADLEY said there had not been a word said about this in the opening, and asked the privilege from the Court of producing evidence to meet the statements made by the witness on the stand.

(The point was discussed at some length.)

The COURT thought it proper evidence, because it tended to what had been set up by the defence, that was to say, that the vulcanizing process, was the only thing which made this India rubber manufacture valuable, and therefore tend-

ing to discredit the value of the Chaffee process. As the Court understood the matter, the plaintiff wanted to show by this witness that that could not be so, because under the old process of dissolving India rubber by using solvents, the vulcanized process could not be carried through; that it would not effect any purpose at all, and therefore that it was necessary, vulcanizing process or not, to have Mr. Chaffee's process, and that that showed the value of it.

Mr. BRADLEY asked to have the point noted.

WITNESS resumed. I think I did not finish my explanations of the difficulties in vulcanizing, did I?

Mr. RICHARDSON. I don't know; I forgot the particulars of your statement in the discussion.

WITNESS. I would like to be heard in full on that subject.

Mr. RICHARDSON. State all then that you know about it.

WITNESS. Give the reasons. I did state why it would not be a perfect and successful process.

Mr. RICHARDSON. You spoke about the decomposition from the rosin.

WITNESS. That is not all; another reason why is this—rubber that has been brought into a plastic state by the use of solvents, has so much turpentine in it that even with care, with means to expose it to the air, even with pressure, without further heat, it would be difficult, indeed impossible to get all the turpentine out of it. The vulcanizing process is the action of heat upon rubber and sulphur. That action is not very well understood; we theorize on that, but we don't know much about it. There is no chemical law known that we can exactly compare it with: but the action of this sulphur and heat has the effect of contracting in the rubber, making the mass more porous and more elastic and less subject to contraction by heat or cold. It imitates in one way, though not very directly, the action of *tannin* on hides, the result of which is leather. The turpentine with which the rubber has been dissolved when the articles are put in the heater, for the purpose of vulcanization, mixes I suppose, in some way with, or enters between the sulphur and the rubber, to prevent the proper action of these materials, as a foreign substance may enter between tannin and the hides, to prevent the formation of leather.

Q. What effect has it upon it?

A. The effect is to prevent vulcanization, and make it very difficult to succeed in vulcanizing. It prevents it. The goods will be destroyed in the attempt to vulcanize them; they will begin to decompose at the end of the process; whereas, if there had been no solvent in them, they would begin to be cured after a short length of time.

Q. Have you tried experiments for ascertaining that?

A. I have.

Q. Is there any other bad effect from it?

A. I don't recollect of any more at present; and, except the odor, the bad smell, that and what I have previously explained would include all the reasons why that I can think of at present.

Q. Are you acquainted with the Chaffee specification,—the Chaffee patent?

A. I am.

Q. Have you read it?

A. I have.

Q. Are you acquainted with machinery in its operation scientifically?

A. I am.

Q. Have you looked at this model (model produced)?

A. From a distance only; I understand it, I believe.

Q. Have you looked at the specification of the patent of Francis D. Hayward and J. O. Bickford?

A. I have.

Q. Have you examined it?

A. I have. I have read the specification.

Q. Is that a correct model of the machine?

A. No, sir. There are only two rollers described in that; and here (in the model) are three.

Q. That is not a correct model, then, of the Hayward machine?

A. Not a correct model. I think there is two rollers, and only two rollers, described in the specification; but otherwise it involves the same operation.

Q. Does he anywhere describe three rollers?

A. Nowhere, I think.

Mr. RICHARDSON wished that there should be no misunderstanding as to the object of the testimony that was now being offered. That (the model) was an accurate representation of Dr. Hartshorn's machine, which had been pointed out as being made from the Hayward & Bickford patent.

Mr. JENCKES. But there the iron rolls are shown as upright; those are horizontal.

Mr. RICHARDSON. Is there any difference, and, if so, what, between the machinery, as described in Bickford & Hayward's patent, and Chaffee's, in its operation and effect in the working up of the rubber?

A. Hayward & Bickford describe two rolls only, and Chaffee six, but involving the same principles in both, describing really the same operation; the same process of matter passes between them—rubber.

Q. How is the result?

A. The result must be the same. I think the Hayward & Bickford machinery would include all of Chaffee's identical, except in one part only. Chaffee's, in result, can make a sheet of pure rubber on cloth; and afterwards, with the next half revolution of the cylinder, spread on the cloth; whilst, by the Hayward & Bickford machinery, they would not be able to make a sheet of pure rubber, and spread it on cloth afterwards, inasmuch as they describe but two rollers,—the rubber and cloth being both put through at the same time; but they are the same in process. Hayward & Bickford's specification disclaims, at first, any grinding; but they take it back again, as it were, when they speak of grinding rubber.

Mr. BRADY objected to the witness being allowed to put a construction on the specification; that belonged only to the Court.

The COURT said it was necessary for the witness to refer to the descriptions of the machinery, in order to compare them; but it was going too far to read the claim, and comment on it. But, if he did not construe the specification for himself, then he could not understand it himself. He could be cross-examined as to that; and if it should be found that he did not understand it, then, of course, his testimony amounts to nothing.

Mr. BRADLEY. We understand your Honor, then, to rule that his statement as to the meaning of this specification is not evidence for this jury.

The COURT said of course it was not. It could not be introduced for that purpose; but whilst the witness was comparing the machines, he must state what he understands by them, and by the patents of them; as an expert, he could not be called upon to construe specifications.

Mr. RICHARDSON (to witness.) You said the same process was in both?

A. As I understand, and as I know, it must operate; I know, without seeing them operate, that the process must be the same; I know that, from the nature of machinery, and its operation, and the principles that govern mechanics, and the nature of the matter operated on.

Q. In practical operation will the Chaffee process, as described in his specification, fix the rubber to the cloth by means of rollers?

A. It will.

Mr. RICHARDSON read the claim in the Hayward & Bickford patent, and proceeded.

Q. Does the Chaffee machine fix it into the substance of the cloth?

A. The Chaffee machine, as described in the specification, must perform all those processes, and correctly; it may be stated by those precise words, that have been read, though Chaffee did not use them. But the process must be the same; the result is precisely the same; that peculiar action of those rollers, by heat, with that peculiar kind of matter passing through them is the same; the result must be the same, and the process the same; Chaffee, I think, does not use the word "fixing;" he does not say that, "by the old process, it can be readily peeled off;" he does not use the term.

Mr. BRADY objected to this; and

The COURT directed the witness not to point out the differences in the specifications.

Mr. RICHARDSON. Have you made any cloth, or seen any made, in a machine, such as described in Chaffee's specification? if so, state where and when.

A. I saw some cloth made in Mr. Chaffee's establishment, though Bourn & Brown's I believe it was called, but I think Chaffee has an interest in it, several days since I came here, and since I read Hayward & Bickford's specification.

Q. What sort of a machine was it?

A. It was the Chaffee machine.

Q. Was it substantially what is described in the Chaffee specification?

A. It was.

Mr. BRADLEY insisted that the machine be explained, and the Court acceded to the propriety of the witness being asked to do so.

Mr. RICHARDSON. What was the machine?

A. The machine was Chaffee's machine precisely; two rollers, I think, for grinding, and four for spreading, precisely as it stands in the specification. It did not stand as this model does. These four rollers were detached, not as in this machine; but there were six rollers in all; four arranged as these are arranged, and two elsewhere, as those are arranged, and heated by steam.

Q. Are those the goods that you saw made (rubber cloths produced)?

A. These are the goods that I saw made; I saw the rubber ground into the cloth, spread upon the cloth, fixed upon the cloth, and pressed into and down upon the cloth.

Q. Show us a specimen where it is ground into the cloth?

A. In every one of the specimens (although the process was varied a little, such as having the rubber in contact with the fast roller, while the cloth was in contact with the slow roller, while the cloth was in contact with the fast roller again, when the motion was even in both rollers), I did not see any difference in these processes; they pressed it down on the cloth, and fixed it there, so that it could not be peeled off.

(The witness then went over his specimens *seriatim*, explaining, by labels, the methods in which each of them had been prepared.)

Mr. RICHARDSON. There is one here, marked "Rubber out of gear, not revolving," what does that mean?

A. That means that the roller with which the rubber is in contact is thrown out of gear, and strictly does not revolve at all, but the process is the same.

(The other mechanical variations enumerated were explained in the same way, and their productions exhibited to the jury.)

Q. What is this?

A. This is "Rubber, slow and even." That means the rubber was in contact with the slow roller, while the cloth was in contact with the fast, and at the next half revolution of the cylinder pass them back between rollers of even motion.

(Several specimens of rubber were here produced.)

Q. Look at those specimens and tell us what the compound is to your own knowledge?

A. They are all rubber I believe; they look like specimens that I saw brought into a plastic state by the Chaffee machine; some little coloring matter may have been put with one of them, a little lampblack, I think.

Q. With which was the lampblack put?

A. One, I think, of these two.

Q. Is that the raw rubber?

A. Yes, sir.

Q. At what stage is that?

A. I don't know the technical term of this stage, it is spongy and in the condition in which the workmen put the coloring matter, the compound to it.

Q. Was that finished grinding?

A. Yes, but it is cold now. It would have to be warmed up or ground again, which is the same thing.

Q. What is that?

A. That is pure rubber, without solvent or any composition, brought into a plastic state by the Chaffee machine, and then spread by the Chaffee machine. That is a pure rubber sheet, no cloth about it.

Q. Now, sir, what does the machine when spreading first produce?

A. Two products together it may produce, and indeed two are described in the specification.

Q. What does it produce?

A. It does produce two, one is rubber spread into cloth, the other produces 9-10 of all the productions in this process; it produced a sheet of rubber, and at the next half revolution of the cylinder the same sheet of rubber spread upon cloth.

Q. Does it not always, in the operation of machinery, produce the sheet of rubber before it was spread?

A. Not always. This machine passes both the rubber and cloth through at one operation, but in 99-100 of all operations, it forms a sheet in one half revolution, and at the next half revolution the sheet is transferred to the cloth, but that is not always the case. Those black specimens there are exceptions; they were not so done.

Q. You have got some thicker specimens there, made by the Chaffee machine; is that pure rubber?

A. I think so. I am not sure. I have forgotten all about these specimens, or nearly all, but that is pure rubber spread into cloth, I believe, at the same time as we spread the sheet.

Q. Have you got any more specimens there?

A. We have many specimens here, but really I forget whether we did not put some compound with those. Those are pure, I think, but some lampblack was put with one of them.

Q. Those are sheets spread out with the Chaffee machine?

A. Yes; but one or more of them, I think, were compound rubber, spread with the Chaffee machine.

Q. You have been acquainted for twenty years, you say, with the rubber business, making experiments in it. Do you know whether the pure gum will decay, when spread upon sheets with this process?

A. I have been acquainted, I think, with all that was publicly known, and has been included since 1834. There was no process then known of manufacturing pure rubber into sheets without a solvent.

Q. I want to know whether you have ever seen any other specimens of pure rubber manufactured without a solvent?

A. I think not till I saw it here.

Q. Never saw the manufacture?

A. Never till I saw it here.

Q. Have you seen that which you knew to have been manufactured without any solvent?

A. Yes; I have seen goods that I knew had no solvent, that is that must have been manufactured without a solvent.

Q. Now I speak of the pure rubber gum, I wish to know whether it decayed or not?

A. Pure rubber will endure as long I think, indeed much longer than those mixed with solvents, and quite as long as the gum mixed with the various compounds, chalk, lead, &c., and indeed, I think, quite as long also as that which is vulcanized. All have their peculiar conditions, they will all decay in time; some of them if exposed to the action of the sunlight, especially, will decay, and so with every kind pure and impure.

Q. Have you read the specification of the patent of — Atkinson?

A. I have.

Q. Do you understand the process there described?

A. I believe I do.

Q. State whether that is a model of it?

(Model exhibited.)

A. That is a model of it, a very good representation of it. But I think these screws were not described in the specification.

Q. How is the length?

A. As compared with the breadth?

Q. Yes.

A. Atkinson describes this large roller some 16 feet, I think, from this small one.

(Mr. JENCKES by mutual consent continued the remainder of the examination of this witness for the day.)

Q. State what you understand the process described in this specification to be?

A. I understand the process or processes described in the specification to be to spread rubber, that has been previously prepared by a solvent, into cloth, and then drying it.

Q. How is it spread, and how is it dried?

A. It is dried by heated rollers, generally by one roller, and by this specification drying is to go on while it is spread, and one and only one heated roller is used. But if they are not to use the spreading portion at the same time as they use the drying, then two rollers may be heated. If spreading and drying at the same time, then one roller above is heated, and the prepared rubber, dissolved rubber, or softened rubber, comes in contact with one roller, a cold roller, and in contact with the cloth on another cold roller.

Q. Are or are not the rollers which do the spreading, described as having been heated in this specification?

A. No, sir; it is described as a cold roller.

Q. What do you mean by it?

A. This (referring to the first small roller), is the roller always cold. The next, as described, may be heated when the process is not going on, when the rubber has been spread. Then that one may be heated, but this one never; that one while the spreading is going on.

Q. How are they described as being heated?

A. I don't know (reads), I recollect now, by steam.

Q. What is the heat for?

A. The heat is to dry the solvent out of the rubber. It is indeed mainly as described in the specification. It is more of a drying machine than anything else.

Mr. BRADLEY objected to the witness explaining the specification.

The COURT. Whether his notion is correct or not, is for the jury to say. He must state what he understands to be the machine, and the effect of the machine; how else can he compare the two together?

Mr. JENCKES. I ask him whether the result produced by this machine of Atkinson is substantially the same as, or different from, that described as the Chaffee machine or process?

A. The result appears, as I understand it, from the Atkinson patent, to be entirely dissimilar. There is no one principle that is common to both of them. They are as directly opposite in regard to the process, as it is possible for me to conceive of two things. In Chaffee's machine, the process is to spread rubber without a solvent, prepared rubber without a solvent. There is no part of this machine of Atkinson calculated to prepare rubber without a solvent. No part of it is so stated in the specification, and certainly nothing in the machine would indicate it. Chaffee's machine, as I understand the specification, can spread a sheet of pure rubber into cloth without a solvent. There is nothing stated in this specification for doing that, and certainly nothing in the nature of the machine, after it is constructed, that would enable you to do it. There is the absence of heat to begin with. This does do one thing that Chaffee's specification does not state. This does dry rubber, and provides for it by one or two hot rollers. It makes heated rollers necessary, and that is no part of the Chaffee machine. It does not dry rubber; it is not intended to dry it. That compound which is submitted to his machine is not intended to be ground. Therefore the processes are entirely dissimilar. This one spreads dissolved rub-

ber. The other can spread dissolved rubber, the rubber previously prepared by some chemical process, dissolved in some menstruum. It can spread that solution into cloth, and it can dry out that solvent after it has been so spread, so that it is entirely dissimilar from any process named in the Chaffee specification. The heat supplied is to two out of the three rolls named in the Atkinson machine. Heat is applied to two, and being two out of the entire three, it therefore seems the most essential part; here is the drying of it, and a very essential one, as from the nature of this solution that is put into cloth it is very important to dry it. There is an endless web made of the cloth which is to run over the two cylinders, and that must occupy considerable time, and the two rollers are then intended to be run until that composition has dried out nearly all. Hence, if in the process of running, this covering should accumulate too thick, I suppose it is then intended to stop the action of this roller, and take off the composition or solution rather, and let this drying process go on distinct by itself, which is not in Chaffee's machine at all. I cannot think of or see any one principle, or process, or part of a process, which is common to both machines.

Q. Is there any drying process needed in Chaffee's machine?

A. None whatever; drying would be an injury in them, and if this machine working with the composition described—with rubber previously dissolved by some chemical process, turpentine for instance, if this should run with a hot cylinder or roller here, then his machine would not work at all. The rubber would stick to the roller, it would not run. Therefore, wisely this is designed to run with a cold roller. It seems well adapted to the purpose which the inventor intended to carry out.

Q. You say you are acquainted with the use of grinding machines; have you seen them in use—Chaffee's?

A. Yes, sir.

Q. And the spreading machines?

A. Yes, sir.

Q. Will you state whether or not a beneficial effect can be produced by the use of that process without the use of cold water, for the purpose of cooling the rolls?

A. Yes, I think from the reading of this specification it would be a very easy matter for an expert or an experienced mechanic to construct—

Mr. BRADLEY. I object to this.

(WITNESS in continuation), to construct those rolls so that they should never require cold water, and I should judge from the dimensions of those I saw working, that careful men working with those would never need cold water; that is, careful men who attend to their business and stand by.

Q. What is the reason why cold water is not necessary where the rollers are of large size?

A. Rolls of a large size (inquiringly)?

Heat is generated by friction, as well as heat produced by steam. Heat generated by friction is proportionable to the weight of metal, the size of the roll, and the speed. Hence of equal speed, the roller that has the largest diameter must accumulate least heat from friction, while the roller of smallest diameter must accumulate, because being of unequal speed, the largest amount of heat from the friction.

Q. Will you state whether or not the mechanical contrivances for heating and cooling cylinders in motion, are or are not well known in the arts?

Mr. BRADLEY objected on two grounds. The only man who could testify to the sufficiency of the specification, was the man engaged in that kind of business, besides the art should be taken at the time the specification was made.

Mr. JENCKES said he would confine himself to that time.

Mr. BRADLEY asked to have his objection, as to the former point, noted.

Mr. JENCKES, I will ask this witness as a matter of fact and of his own knowledge, twenty years ago, whether or not the mechanical contrivances for introducing heat into cylinders in motion, and cooling them, were not well known?

A. There was then, and is now, but one sensible mode of introducing heat into revolving cylinders, that is, into the centre by means of a stuffing-box. I think that must have been universally known then and now. There is one other mode known, perhaps, to a more limited number, because it is more complicated and would be more difficult; that would be to introduce heat through a tube any where between the centre and the periphery. But I think even then and now, all persons who have that subject in their minds, whether experts or not, would see that to use that process would require a complicated number of what is termed universal or knuckle joints, which are obviated by this well known and universally used process, of introducing it into the centre by means of a stuffing-box.

Q. How is it about cooling?

A. I think that mechanics, generally, even at that age, were intelligent enough. I have not seen great improvements since then. I think that mechanics would have known then, that if a roller is to accumulate heat from friction, they would know that heat would.

The COURT. There is nothing in Mr. Chaffee's patent about cooling.

Mr. RICHARDSON said the patent contained mention of its heating to a certain number of degrees, and in one construction of the patent that might be important.

WITNESS. As reading that specification myself, I should then or now, without any hesitation, have brought to my mind two modes of increasing or diminishing the heat. First, as described by Chaffee, to about two hundred degrees Fah. by steam. I would suppose that that inferred that I might, in getting it up to two hundred, exceed that by a few degrees, and therefore I should expect, in making the first machine, after that description, to provide some means by which I should be enabled to bring it back again to two hundred, and I think I would naturally have introduced such an arrangement, inasmuch as it would have required no great effort of mechanical skill or ingenuity by which to introduce cold water through tubes then as now. I would adapt the diameters or circumferences of those cylinders to a particular size, so that they should not accumulate heat too fast, but accumulate it fast enough to go at the requisite speed and give additional strength. I should, in all this, follow nearly the dimensions given in the specification, and I think mechanics, generally, both then and now, would have the same ideas respecting the subject.

After some conversation between the Counsel, in which Mr. Jenckes announced his intention of examining the witness relative to Dr. Howe's machinery—

The Court adjourned for the day.

SEVENTEENTH DAY.

PROVIDENCE, Tuesday, Feb. 13, 1855.

TESTIMONY OF DURANT, MARING, CHAFFEE, SHAW, HORN
AND McLAUGHLIN.

MR. DURANT, CROSS-EXAMINED BY MR. BRADLEY.

- Q. What is your occupation?
A. My general occupation is printing and engraving.
Q. Have you been a witness before for Mr. Day in any case?
A. I think one case only.
Q. You were an expert in that case?
A. I was.
Q. Upon what subject?
A. Hydraulics.
Q. A case of flowing and fluids—water-power?
A. Yes, sir.
Q. Have you been here during the whole of this trial?
A. Not the whole; I think the trial had progressed two or three days before I came here.
Q. Were you here during the argument on the demurrers, or any portion of it?
A. I think not.
Q. The law questions?
A. I think not.
Q. I mean at Newport?
A. I think not; I was at Newport, but not during the argument on the demurrers.
Q. Were you there when the case was to be tried?
A. I was there at the adjourned meeting of the court, but I think there was no argument at that time.
Q. Were you at the Trenton trial?
A. I was.
Q. Have you any business connection with Mr. Day?
A. Nothing more than the usual business of neighbors in business, such as buying and selling, borrowing and lending.
Q. No partnership connection with him?
A. None whatever—never had.
Q. Have you ever been a machinist?
A. Never.
Q. Never worked at nor had charge of a machine shop?
A. Never.
Q. Have you ever been a practical mechanic in the manufacture of boots and shoes?
A. No, sir.
Q. Never had practically any thing to do with it?
A. No, sir.
Q. Where have you tried your chemical experiments with rubber?
A. At my own residence, and my own laboratory, generally.
Q. Did I understand you to say that the dead oil, as it is termed, which is one of the constituents of naphtha, is not a solvent of rubber?

A. Not so treated in chemistry, or in the books, or by practical men, or by myself.

Q. I confine my question to your own experience.

A. In my own experience it is not.

Q. You mean you have tried it?

A. I mean I have tried it.

Q. Be kind enough to refer to any book which shows that it is not a solvent of rubber.

A. I think naturally we could find no such thing in books, it being a negative; I should as soon expect to find it stated in a book that sugar is not a solvent of rubber.

Q. Just make this as brief as you can. Have you delivered lectures?

A. Never.

Q. Have you lectured in this city on animal magnetism?

A. Never. What you have reference to was matter of publication; I never delivered a lecture in any city.

Q. Confine your answers to my questions.

A. I endeavored to in that answer.

Q. You state that the books state that dead oil is not a solvent of rubber?

A. I do not so state.

Q. Then I misunderstand you.

A. I think you do.

Q. Is there any book that so states?

A. I presume not; very naturally they would not; a book would be about as likely to state that sugar was not a solvent of rubber.

Q. We don't care what a book would be likely to say.

A. It is you who misunderstand my answer, I think. I stated that none of the books so stated—it was not so understood in chemistry.

Q. Be kind enough to say what book treats of it at all, in this relation, as to whether it is or is not?

A. Ure's Dictionary of Arts, Mines, and Manufactures, treats of coal-tar.

Q. I am speaking of dead oil, which is one of the constituents.

A. Ure's Dictionary, the only book of any authority that I could have access to here, I find treats of coal-tar and several of its properties.

Q. Confine your answer to my question. Does Ure's book, or any other, speak of dead oil, which is one of the constituents of coal-tar, as being or not being a solvent of rubber?

A. No book—not only Ure's, but no book—speaks of dead oil as being a solvent of rubber.

Q. Does any book that you ever saw speak of it as not being a solvent of rubber?

A. No, sir; and I should not find it to be so stated in the books.

Q. Is alcohol a solvent of rubber?

A. Not so considered.

Q. Does this book of Ure's speak of alcohol, or not speak of alcohol, as a solvent of rubber?

A. I presume not.

Q. You think not?

A. I think not; I think it speaks of alcohol in connection with another substance—I think the carburet of sulphur—as being partially a solvent of rubber.

Q. Is dead oil a fixed oil?

A. We so consider it. It is a very indefinite term. I think the term dead oil is original with Dr. Ure, for that particular part of the empyreumatic oil which arises from the distillation of coal.

Q. I see Dr. Ure says caoutchouc dissolves in fixed oil, and you say dead oil is a fixed oil?

A. It is generally considered a fixed oil; but that term, dead oil, I think originated with Dr. Ure. I know of no other author who treats that particular matter as dead oil. That would not distinguish it from all that remains—the bitumen and dead oil together. I think Dr. Ure divides it into pitch and dead

oil. I think all other authors treat it as but one matter. I should so treat it myself. I should not separate it, to distinguish one as dead oil and the other as pitch.

Q. You say you consider dead oil as fixed?

A. I so consider it; I do not know whether Dr. Ure so considers it. That would depend again upon how far down it is distilled. It is a very indefinite term, this dead oil.

Q. You refer to Dr. Ure as authority, and yet you differ from him in the sense in which fixed oil is used?

A. I am not sure of that; I have not examined his work lately on that point. I should want some time to examine it. I should consider him very good authority for the amount of naphtha contained in the coal-tar.

Q. But you consider dead oil as fixed oil?

A. I so treat it. I do not know how Dr. Ure treats it; I have never examined him on that point.

Q. If Dr. Ure includes dead oil among fixed oils, then you find his work to which you refer saying that caoutchouc dissolves in fixed oil?

A. If I find in his work that caoutchouc dissolves in fixed oil, that would not settle the point with me whether he correctly treats dead oil as a fixed oil or not.

Q. Can you tell us at what degree of heat naphtha will boil or evaporate?

A. It will evaporate at all degrees of heat—at common temperatures.

Q. You said something yesterday about naphtha in coal-tar as passing off from the rubber before the rubber got heated up?

A. I think it would; I know it would.

Q. At what degree of heat will it boil?

A. I do not know the degree of boiling point; I know the degree of evaporation is any degree. It is constantly evaporating in the air.

Q. About what degree?

A. Different coal-tars and different asphaltums and bitumens boil at different degrees; I think they are laid down in the books at from 170 to 350.

Q. The naphtha procured from distillation of the coal oil of the gas works—does that boil at a greater or less degree than 200?

A. That I do not recollect.

Q. Does it boil at a greater or less degree of heat than rubber dissolves by heat?

A. Much less, I should judge.

Q. Does or does not Dr. Ure state that the naphtha procured by the distillation of the coal oil of the gas works boils at 316 degrees Fahrenheit?

A. I do not recollect.

Mr. BRADLEY here referred to the book to show that he did so state.

Q. Now, as to caoutchouc, will you state to us at what heat that is dissolved?

A. I do not recollect.

Q. It melts at 248 degrees Fahrenheit, Dr. Ure states.

A. I think he is mistaken, though I do not recollect.

Mr. RICHARDSON objected to this mode of examination from a book.

WITNESS. If it is intended to ask where I get my learning, I wish to explain.

Q. You referred to this book?

A. But not to give my meaning; I get my learning from books and from nature.

Q. Doubtless; and you stated that naphtha would boil at a much less degree than rubber would melt, and Dr. Ure states otherwise?

A. I do not think I so stated. I had rather explain it. I stated that the authors say that naphtha boils at various degrees of heat from 170 to 350.

Q. Naphtha from different substances?

A. Yes, sir.

Q. What book speaks of naphtha that comes from coal-tar as boiling at less than 316 degrees of Fahrenheit?

A. I do not recollect.

Q. You have stated that rubber in which camphene has been used as a solvent, cannot be vulcanized successfully?

A. I did not say so.

Q. What did you state?

A. I stated that there was great difficulty in vulcanizing rubber that had been brought into a plastic state by a solvent—that it oftener failed than succeeded.

Q. Now do you know whether or not, in point of fact, the rubber concerns in this country, which made vulcanized shoes for several years, and continued to vulcanize their shoes, used camphene as a solvent in making their shoes?

A. I know that to be true—that they used camphene; but they always used a process for bringing them into a plastic state, independent of and in addition to camphene; therefore they used a small portion of camphene, which did not interfere so much with the process of vulcanizing.

Q. How much camphene do you know was used with the rubber when the shoe was vulcanized?

A. I do not know precisely, of my own knowledge, how much at any time was used by others.

Q. Then you do not mean to be understood as saying that camphene, used in place of coal-tar—the same amount—would prevent the shoe being vulcanized?

A. No, I do not so mean; I believe a small portion of camphene or coal-tar can be used in rubber, and yet have it vulcanized successfully.

Q. You might use as much as of coal-tar, and vulcanize the shoe according to your judgment, or not?

A. As much? I should think not so much camphene as coal-tar. I should certainly use as much camphene as naphtha, and have it vulcanized.

Q. Suppose you take the same bulk of camphene that we now take of coal-tar, and put it into the rubber; would that prevent the rubber from vulcanizing successfully?

A. In that case, I must ask how much we would take of coal-tar?

Q. I thought you knew from the testimony?

A. No, sir.

Q. How much camphene can you use to a pound of rubber, and have it vulcanize?

A. That is rather indefinite from this fact, that it is possible to use four quarts of spirits of turpentine to a pound of rubber and vulcanize, that thereafter, by first evaporating all or nearly all the turpentine before it goes into the heater in combination with sulphur, while a much less quantity, even one quart of turpentine to a pound of rubber, which would bring it into a plastic state without further aid of machinery, if immediately put into the heater in combination with sulphur, I think, would prevent its vulcanizing.

Q. How much less than one quart to a pound would prevent it?

A. I could not state; I never knew the precise quantity, and would not like to estimate it now.

Q. Then, as to how important it is to dispense with solvents in the manufacture of vulcanized shoes, your most definite statement is that?

A. The most definite statement is, that if you want successfully to vulcanize rubber after having dissolved it, or brought it into a plastic state with a solvent of any kind, it is necessary to evaporate a very large portion of it before you can submit it to the process of vulcanizing—evaporate it or get rid of it.

Q. When you state a very large portion, that is very vague?

A. Very vague and indefinite.

Q. And you cannot be very definite?

A. No, sir.

Q. You cannot state precisely?

A. Cannot state precisely.

Q. But if you evaporate it you can put in four quarts to a pound?

A. You could put in four quarts to a pound, and you might generally succeed in vulcanizing by drying it out.

Q. Now, sir, I believe I asked you whether you had ever worked in a machine-shop, or been a machinist?

A. And I answered no.

Q. Did I understand you to state yesterday, that you thought Atkinson's patent operated upon a different principle from the Chaffee patent?

A. Entirely different.

Q. In the Chaffee patent is there a process of preparing rubber, and also of applying the prepared rubber to cloth?

A. I so understand it, clearly.

Q. Do you understand that there is in the Atkinson patent a process of applying prepared rubber to cloth?

A. No, sir, there is not, strictly; there is strictly, in the Atkinson patent, described a process for applying a rubber solution to cloth.

Q. A solution of rubber?

A. Yes, sir.

Q. How is that applied?

A. It is applied by a cold cylinder revolving against a cloth, carried on to other cylinders.

Q. Are there not in the Chaffee process two cylinders revolving near to one another?

A. Yes, sir.

Q. Is not the rubber and cloth put together between those cylinders, and the rubber pressed by their action upon the cloth?

A. Yes, sir.

Q. No doubt about that?

A. No doubt about that fact.

Q. Is that process described or not in the Chaffee specification?

A. What process?

Q. The process of pressing the rubber and cloth together upon two cylinders, revolving upon one another?

A. Yes, sir, it is so described.

Q. Do you or do you not consider, that where you take rubber and roll it on the cloth by means of two cylinders revolving with an equal velocity, one upon another, that is similar to putting rubber and cloth together between two cylinders in the Chaffee machine?

A. Repeat that question.

Q. State the resemblance or difference, as you choose to consider it, between putting rubber and cloth together, and rolling them together, the rubber upon the cloth, between two cylinders, as described in the Atkinson patent, and putting rubber and cloth between two cylinders revolving with equal motion, in the Chaffee machine and process: where is the difference between these two things?

A. I think the difference is in the statement. Please repeat it once more; I want to catch one part.

Q. I ask you either the difference or the resemblance between putting rubber upon cloth by rolling the rubber and the cloth together between two cylinders—

A. Stop there; that is not described in the Atkinson patent—rubber upon cloth; it is rubber in solution.

Q. Tell me the difference between rubber and rubber in solution. The rubber is put in here (referring to the Atkinson model) in solution?

A. Rubber in solution—not rubber.

Q. Here is rubber put in between these two cylinders (Chaffee machine) prepared to go on to cloth; then you have your cloth go over one of these cylinders; now, sir, tell me whether prepared rubber does not get pressed upon the cloth between two cylinders of equal motion in the Chaffee machine? or is the only difference that one is rubber in solution, and the other prepared rubber?

A. That is the only difference.

Q. Then, so far as the machinery is concerned, the operation is the same?

A. As far as that part of it is concerned.

Q. The only difference is, that in one case the rubber is in solution, and the other, prepared?

A. Yes, sir. In other words, one may be prepared rubber (on the Chaffee machine) and the other may be butter, grease of any kind, which may be spread by the process described in the Atkinson patent.

Q. Take your comparison; would not butter or grease, or any thing be spread on cloth by the Chaffee machine?

A. That is true, but prepared rubber of the Chaffee machine could not be spread by this (Atkinson's). Butter only could be spread by this, or rubber in solution.

Q. Why could not prepared rubber be pressed upon cloth between these two cylinders? (Atkinson machine.)

A. It requires heat in addition to pressure to do it. There is no heat here.

Q. Does not the patent specify that one of these cylinders may be heated?

A. For one purpose, not for another, and not the one with which the rubber comes in contact. There is no provision in the specification for heating it, if the inventor had done so, he would certainly have destroyed his machine for useful purposes.

Q. Is not that cylinder spoken of as being heated? (pointing to one of the two cylinders together.)

A. It provides for heating that, but, not when the rubber is in solution between the two: only when there is no rubber in solution between them, and only when the cloth has been coated and they want to dry it. Then that cylinder (large one) and this are heated.

Q. Then there is, for certain uses of this machine, provision for heating this cylinder and that?

A. There is, but never this one (a third cylinder).

Q. Now compare these two models (two Atkinson models). These two cylinders are the same size (one model), and these two are the same (other model)?

A. Yes, sir.

Q. That (large cylinder) is larger than the others; is that necessary?

A. I think not; I might vary the machine and vary the dimensions.

Q. Does he not in so many words provide for the variation?

A. I do not know that he does, but as an expert, I should not follow his dimensions precisely.

Q. "This cylinder (large one) is made of metal, and when used as a drying cylinder should be large in diameter, say three feet." Suppose this machine is used for the application of rubber to cloth, would you then, according to his description, make that large or just as it is made there (referring to the model in which it is made small)?

A. According to his direction I should make that large. He directs that to be made large, but I should think it would not be fatal to the operation of the machine if it were made small.

Q. Does he not specify that this is to be made large when used for a drying cylinder?

A. I think, from reading it to-day to refresh my memory, that he describes that at all times to be of a fixed size, that is, if large, at all times to remain large.

Q. Now, sir, I understood you to say that you saw a machine, which you called the Chaffee machine, in operation, doing certain work, samples of which you showed here yesterday?

A. I did so state.

Q. Is there or not a method in the Atkinson machine of adjusting one of these cylinders to the other, so as to have it closer or more remote?

A. I think not; I do not recollect any description of it.

Q. Then how do you understand this language—"The outer cylinder is made adjustable by means of screws or otherwise, so that it may be brought into contact or removed any required distance from the other." Is there any description there for adjusting this outer cylinder to have it nearer or more remote from that inner cylinder?

- A. It appears that there is.
- Q. Is there any such mode in the Chaffee process?
- A. I do not recollect any such part described.
- Q. Do you recollect what you stated yesterday about the Atkinson patent?
- A. I do not recollect any thing I stated, but if you will call my attention to any particular point, I will see if I can recollect it.
- Q. In regard to the very point just asked you, did you or not state that there was no mode of adjusting the rollers?
- A. I do not recollect that yesterday.
- Q. (By the COURT.) You stated that there were no screws.
- A. No screws.
- Q. There is no process of adjusting the cylinders described in the Chaffee specification, to make them nearer or more remote?
- A. I think not; I do not recollect any.
- Q. Will you state to the jury about what would be the weight of that cylinder as ordinarily made? (one of the upper rollers.)
- A. It would be difficult to approximate to it.
- Q. You have a certain length and diameter?
- A. And certain thickness; and we could mathematically compute it. I could compute it precisely, but I do not feel now like doing it.
- Q. Will you give us any approximation to the weight?
- A. It would be impossible at present.
- Q. As these rollers are adjusted one to the other, would not the weight of the upper cylinder press down upon the others?
- A. It would most assuredly, unless there was something to hold it off.
- Q. Is there any thing in the specification to hold it off?
- A. I think nothing of that kind is described.
- Q. When you come to work these different cylinders, by means of these cogs and gearing, do they work perfectly even?
- A. How perfectly even?
- Q. So that the cylinders revolve at precisely the same distance one from the other, or is there a little jarring occasionally in the gears which would raise and depress the cylinder slightly?
- A. I think the cogs would not, of themselves, raise and depress it; the inequality of motion in the cogs would produce what is called a scraping motion—friction.
- Q. Irregularity I mean?
- A. Irregularity I mean; but I think they would not produce a rising and falling so as to make an unequal sheet in any other way than by weaves from the imperfections of the cogs.
- Q. In the Chaffee machine is there any mode of adjusting the relative position of these cylinders on to the other?
- A. I do not recollect; I think of one or two there is, but not of all of them.
- Q. You have one of them fixed, is it necessary to move all the cylinders down almost always?
- A. It is not always necessary to move any of them.
- Q. How was it done in the machine, which you say was substantially the Chaffee machine?
- A. I think the one I saw had an arrangement to adjust some other rollers, though perhaps not all—it may have been all.
- Q. How were the cylinders placed one towards the other?
- A. The machine I saw was very similar to this one.
- Q. Were there four cylinders, one above the other?
- A. I think there were.
- Q. They were adjusted so that you could regulate their position one to the other?
- A. I think one or two of them were; I think not all. I did not pay much attention to that part of it; my attention was not specially called to it.
- Q. Suppose you want to put through different thicknesses of cloth, or dif-

ferent kinds of cloth or leather, with different thicknesses of rubber, would not you want a way of doing this?

A. I would, most assuredly.

Q. Where does the cloth go in, in the spreading part of the machine?

A. Different processes; different kinds of goods require it to go in at different places. At different times, I believe, they use every roller.

Q. Do you mean to say the Chaffee machine provides for different places for different kinds of cloth to go in?

A. I do.

Q. Do you mean to say it provides for different places for different kinds and thicknesses of cloth?

A. He does not state for different cloth; but different places for different goods.

Q. Have you got a copy of these specifications?

A. I have.

Q. Just state the different places and different kinds of cloth provided for?

A. I did not state that it provides for different cloth, but for different goods.

Q. To go back a moment: how would you adjust these four rollers one to the other?

A. There are two ways in which I could do it; one would be to have screws adapted to each and every roller, to keep each one as far remote as was required.

Q. How can you do that?

A. That can be adjusted by what we term thumb-screws, arranged to raise the axle of each roller. Another could be by screws, similar to these, or what we call head screws.

Q. Where there are four or three rollers?

A. Suppose each roller rests on the one below, so that there is nothing between them. Now let your rubber and cloth enter; the resistance which the rubber and cloth themselves would make would press the weight of the two rollers up to your head screws.

Q. You say the resistance of the cloth and rubber would press them up?

A. The resistance which the rubber makes to the cylinder.

Q. Then you would rely, for raising one of these cylinders, upon the resistance which this rubber and the cloth would make?

A. That is one method.

Q. What is another?

A. One other method would be thumb-screws.

Q. Where would you put them?

A. At both sides of the machine.

Q. You would raise this upper one by this screw here?

A. By one process, that would enable them all to rise.

Q. By the pressure of the rubber and cloth; now how would you get your screw on that second roller?

A. By a separate, distinct machine?

Q. No, sir. By this machine?

A. By this screw process?

Q. Yes, sir.

A. Suppose we wanted to have a space between any two of these rollers. There are four of them, all touching together; let up the screws a half an inch, and let the rubber or any other matter pass between—

Q. That you have explained already. I want the other method?

A. Another method would be thumb-screws.

Q. Where do you put them on?

A. On each side.

Q. Against the cylinder here?

A. Not at all; the better place would be at the side.

Q. How do they reach that second cylinder?

A. They may reach the journal, and the other journal, upon which it rests, may be raised by thumb-screws.

Q. Not where there are four cylinders?

A. Any number; it makes no difference.

Q. Can you adjust your four cylinders as easy as three?

A. Not so easy; one would be rather easier to adjust than two; but they could be adjusted all on the same principle.

Q. Could you, by a thumb-screw, adjust a roller that would weigh three tons?

A. O yes, sir, by what strictly might be called a thumb-screw. We apply the term to the small machines we use, such as microscopes, compasses, &c.; but the same principle would apply to a large screw with a circle, which acts as a lever, to take hold of and turn by hand,—any screw turned by hand.

Q. Would not your lever interfere with the gearing?

A. My hand, serving as a lever, touching the periphery of this wheel, turns the cogs at this distance from the centre.

Q. What was the mode in which they were adjusted in that machine you saw?

A. I think it was by these thumb-screws; I did not examine it very minutely; I saw some preparation of that kind to separate and approximate the rollers.

Q. Now, to go back, I understand you to say not different kinds of cloth, but different places for the entering of the cloth; tell us what different places?

A. There are many of them, and I will find each in detail. (Reads.) "In which case, the gearing for driving the fourth cylinder is disengaged, and the cloth or other article to be coated is made to pass into the covering machine, between the second and third cylinders."

Q. That is where you have but three cylinders?

A. No, sir; it is where there are four; it is in the fourth cylinder specification.

Q. Go back and read that very sentence, and see if it is not the case where there are three cylinders used?

A. Still it is the case where there are four cylinders.

Q. That is the case where there are three cylinders?

A. No; it is four cylinders.

Q. Read that entire sentence?

A. (Reads.) "Sometimes the three first cylinders only are used, in which case, &c."

Q. I ask you, by this specification, where the cloth goes between the second and third rollers, isn't it the case in which three cylinders are used only?

A. Three only are used.

Q. The other is thrown off?

A. Disengaged means out of gear.

Q. Now show me any cases where you use four cylinders, and in more places than one?

A. (Reads.) "The cloth enters between the bottom and second cylinder, while the rubber enters between the bottom and third cylinder, when the coating of the cloth is effected."

Q. Now, in what other places than that does it enter?

A. (Reads.) "There is advantage in passing the rubber between the third and fourth cylinder." That is three.

Q. Let us keep our minds clear. I ask whether any more than one place is specified where the cloth is introduced. You stated it was in several places, in different kinds of cloth?

A. I think we misunderstood each other in relation to three or four cylinders. In all these cases I now state, wherever it enters the three or four several ways, it is in a machine of four cylinders.

Q. We have understood one case where it enters when one cylinder is thrown off or disengaged?

A. The term disengaged is used, not thrown off; I still understand it is a machine of four cylinders.

Q. We differ as to disengaging?

A. They are in or not so.

Q. Now where they use the four, show me any two places where the cloth is used?

A. I do not know that any one is using all four at one time, and yet I think there would be such cases.

Q. You are comparing a machine that you say substantially is the Chaffee machine, and we want to see how it operates—in what places the cloth is put?

A. I have named three.

Q. No, sir.

A. Then we misunderstood each other; let us go back again and see. Beginning at the forty-fourth line I read—"sometimes the three first cylinders only are used, in which case the gearing for driving the fourth cylinder is disengaged."

Q. You perceive my question is, where the four cylinders are used, where are the three or four places where the cloth is introduced?

A. Where they are used at the same time?

Q. Yes, sir.

A. I shall have to examine this paper to see. I stated it was a machine of four cylinders at all times; they *do* use it in various ways.

Mr. BRADLEY. I do not know, your honor, that it is practicable to continue the discussion. I will show that it does go in at one place and leave it there. The witness is not correct.

Witness. I want to say that I am correct; at least we misunderstood each other.

Q. My question is distinctly, where the four cylinders are used, in how many places is the cloth put in, and where?

A. I suppose four cylinders being in the machine, they are always in use; they may not be employed in a particular process.

Q. Still the specification says sometimes the three first only are used; you would not suppose they were using the fourth, would you, in that case?

A. I would not suppose the fourth was in operation.

Q. When four are in operation, where is the cloth put in?

A. I am not sure where all four are required in any one operation. I have never examined it with that view.

The Court. It is not worth while to pursue this further.

Mr. BRADLEY. As to where the cloth is introduced, we will leave that until we come to sum up.

Q. How do these cylinders move in respect to one another? Is that described in the specification?

A. It is described, number three is either still or fast.

Q. You were speaking of a machine yesterday that you saw substantially like this?

A. That is true; but that is not this question.

Q. The bottom one is slow on each?

A. Number three moves much slower than the others. That is the slow roller, by the way, that I referred to; all the others are fast.

Q. That is a safe conclusion, and I admit it; is there any difference in the state of the other three?

A. None described in the specification.

Q. When the rubber and the cloth pass together between any two of these cylinders, upon which is the rubber and which the cloth? the fast-moving or the slow-moving cylinder?

A. At times the rubber is in connection with the fast, and at times in connection with the slow—so described in the specification, and so used; I saw it so used.

Q. Do I understand you to say that the cloth is sometimes on the slow moving cylinder, and sometimes on the fast, by the Chaffee specification?

A. Yes, sir.

Q. I would like to have you point it out?

A. That principle is not so definitely pointed out. The rubber is in connection with one, fast or slow, and the cloth is in connection with the other.

Q. Let us understand. You say the cloth goes round the slow-moving roller, and the rubber round the fast-moving roller, where the two come in contact?

A. I do not recollect that it is described which roller it is in contact with, but it describes the passing between two rollers, one fast and the other slow. I think it does not state which one the cloth or rubber is in contact with.

Q. Perhaps I misunderstood you to say it was described both ways in the specification, and used both ways; will you tell me which way is described as the proper way of doing the work?

A. I think there are four or five ways described as proper ways of doing the work.

Q. I mean when the rubber and cloth are brought together between a couple of cylinders, one slow and the other fast, which is the proper way, according to that specification?

Q. I think that is one case only—stated in the specification as used in one particular operation, and it seemed to be an unimportant part of it; and I judge from the specification, not likely to be used. But there is one, and one only that I recollect of, described as passing the rubber and cloth together in the first operation.

Q. Where the rubber and cloth are spoken of as being passed together in the first operation between two cylinders, did those cylinders move at equal or unequal speed?

A. I think that is unequal speed—not stated, but inferred.

Q. Please show the ground of your inference?

A. I would further state that I think it is shown in the drawing—stated in words, in one instance, and stated in the drawing in more than one instance.

Q. Just find what you said was there?

A. Having ascertained this much by the specification—that number three is a slow roller, counting from the bottom, and hence that all others are fast, the specification reads thus: "I sometimes put the prepared rubber directly upon the cloth, or other article to be covered, between the second and third cylinder." The cylinders two and three, evidently, by the previous statement, are of unequal motion, and the cloth and rubber are drawn together between the two.

Q. That is a process, you say, that is only incidentally mentioned, and is not intended to be used?

A. I do not wish to be so understood; I wish to be understood as saying that it is named as an operation, and unimportant compared with the other operations—the fast cylinder being able to make a sheet of pure rubber, and afterwards bring it in contact with the cloth between two other cylinders.

Q. In the main process named, can you state around which cylinder—the fast or the slow—the cloth and rubber goes?

A. I think I could, by reading carefully. I know from the statement contained here that I can find a number of statements which give it precisely.

Q. Which of the four or five different ways that you say are described, is spoken of as the best way in the specification?

A. I think mine the best way.

Q. I do not ask you what you think, but what is spoken of as the best in the specification?

A. I think the term best is used, but I shall be obliged to refer to the specification to find it. (Examines the paper.) I do not see that any one of them is described as the best; it is possible it may be.

Q. State as an expert which is the best way of doing it—to have the cloth going on the fast or on the slow roller?

A. In bringing them both in contact together?

Q. Where the rubber and cloth come together between two rollers.

A. I do not think there is any preference; I have tried both ways, and really, in practice or theory, as an expert, I suppose there would be little or no difference.

Q. You have not been a rubber manufacturer ?

A. Never.

Q. State whether there is any difference, and if so what it is, between the Chaffee spreading machine and the Hayward spreading process, in that regard, as to whether the cloth goes round the fast or slow roller ?

A. There is no difference in the two machines in that particular, but there is a great difference in the description—in the words.

Q. Here is a simple fact : Here are two rollers, in both cases, one going fast and the other slow ; the rubber and cloth are both put together, in each case, between these two rollers ; now in both these cases does the cloth go round the fast or slow roller, or in one case does it go round the fast and in the other the slow ?

A. In one case, it is not stated in words which one it goes round ; in the other case, it is specially stated which way it goes round.

Q. Specify in which case.

A. In the Chaffee case, it is not stated in words which one it goes round ; we are to infer it from previous description ; in the Hayward and Bickford case it is very strongly stated.

Q. Which way ?—that is my question.

A. Stated in words ?

Q. Do you know what the fact is without reading ?

A. I know what the facts and reading are both.

Q. Then be kind enough to state it.

A. I am endeavoring to state the words which describe this, different from the words which describe the other, and that is the only difference which exists. (Reads from the Hayward and Bickford specification, where it speaks of the upper roller as being in contact with the rubber, and as spreading or grinding the rubber, as it were, into the cloth.)

Q. Is that the roller which has the cloth or the rubber around it ?

A. That roller in contact with the caoutchouc, I infer, is the roller which revolves at the greatest speed.

Q. You infer that ?

A. I do from that statement.

Q. That is true. Now you say the description of the Chaffee machine is just the same in substance ?

A. In substance, but not in words.

Q. Find the substance that says the rubber is round the fastest roller, and comes in contact with the cloth ?

A. To get that substance from the Chaffee specification we have got to detach paragraphs and parts of paragraphs to make it. First we will take that which speaks of a slow roller. (Reads.) "I sometimes put the prepared rubber directly upon the cloth, or other article to be covered, between the second and third cylinders." From that statement I infer that the rubber is either in contact with the slow or with the fast roller.

Q. Don't you know that the cloth is taken in between this first and second cylinder, and there only ; that that cloth is brought around over the second cylinder, which is a fast-moving cylinder ; that the cloth going underneath the second and over the top of the second, is going round a cylinder that moves faster than this third cylinder, which is slow ; and that then the rubber is taken in between the fourth and third, and brought down over the slow cylinder upon the cloth ?

A. I believe that to be so.

Q. In that case the rubber is carried round the slow-moving roller, and the cloth round the fast ?

A. I think that would be so in that case ; that is only one way.

Q. Is not that exactly the reverse of the process described by Hayward ?

A. Yes, that would be the reverse, so far as the rubber in contact with the fast or slow roller would be the reverse ; but that is not the case I am reading here.

Q. Is not that the only case where he specifies the cloth going round one roller and the rubber round the other ?

A. I think that is so; but that is a case different from the Hayward and Bickford, because there is no provision for that in the Hayward and Bickford specification, which describes only two rollers.

Q. In the Hayward and Bickford process there are two rollers, the rubber and cloth coming in contact between them. Now in this machine there is a case where the rubber comes in contact between one fast and one slow. In the Hayward machine, does not the rubber go on the fast roller and the cloth on the slow; and is not the process in the Chaffee machine exactly the reverse?

A. No.

Q. If you say so I will leave it to the jury; explain as fully as you please.

A. The Hayward & Bickford specification does describe the rubber in contact with the fast. The Chaffee specification does describe one process where the cloth passes between the first and second roller and around the second; and again, where the rubber passes between one roller, making a sheet, and finally comes in contact with the cloth. It does describe two or three such processes. But that is not a parallel case here, because the Hayward & Bickford machine cannot do that—cannot pass it between two rollers first, and bring around a sheet in contact with any other. Therefore, to meet that part of the case, there is this provision, and probably more, in the Chaffee patent, and I think it shows precisely the same process: "I sometimes put the prepared rubber directly upon the cloth or other article to be covered." That is, supposing only two motions to be used directly upon the cloth between the second and third cylinders; now between the second and third there is a slipping motion.

Q. Which moves the fastest?

A. I think probably the third is called slow; it matters not which.

Q. In that instance of which you speak which is the fastest?

A. In the case I refer to, I think number three will move the fastest.

Q. On the contrary, number three is stopped and does not move at all; read the next line.

A. They disengage the gearing of the third.

Q. Which will not then revolve?

A. Then of course the second is the fastest roller, and it is brought in contact with the fastest roller. Now I want to show it is precisely like the Hayward & Bickford machine. We put the cloth (for there is nothing in the statement about where we shall put the cloth,) in contact with number three, which does not revolve at all, and the rubber in contact with number two, and then it is identically the process as stated in the Hayward & Bickford machine.

Q. In the Hayward & Bickford patent, are not both revolving?

A. They are both. It makes very little difference; in both cases there is a rolling and slipping action.

Q. If we have got at the difference in the two modes of acting, where the fast and slow rollers come together, and the cloth and the rubber between them, I will ask you whether you can, in both these machines, apply rubber to both sides of the cloth?

A. Not by one operation by the Hayward & Bickford, but by the Chaffee I think you can.

Q. Show us how according to the specification.

A. Not according to the specification; that does not go into these details. I shall have to think a little. I will begin, and try to carry it in my mind. Suppose between the third and fourth roller the cloth and rubber shall enter.

Q. There is no suggestion of that sort in the specification?

A. None whatever; these are details—a great many are left out.

Q. Is there any suggestion that you can spread on both sides?

A. The only suggestion is the combination of four rollers, in combination with these actions. I suppose it is intended men shall exercise their good sense to do it. I think I could, with a few moments' reflection, with a combination of four rollers, mathematically and mechanically, in one operation, bring the cloth in contact with the rubber on both sides.

Q. Can you answer me this question—Whether all the rubber is spread upon the cloth in either of these processes, or both?

A. It depends upon a variety of circumstances: the skill of the workman in adjusting the heat, and in adjusting the softness to the amount of pressure. In many cases, it will all be left on the cloth; in other cases, it will stick to one roller and be scraping it, as it were.

Q. In point of fact, does not this process spread the rubber upon cloth in that case simply with it upon it? Is not that the practical working?

A. No, sir, for I have seen specimens done by the Chaffee machine by this operation. I witnessed, as I supposed it would be, that in some cases the entire amount of the rubber was left on the cloth, and in the other case it kept wiping it on; part stuck to the roller with which the rubber was in contact. It depends upon the amount of heat, softness, compound and pressure.

Q. Did it depend upon the revolution of the different cylinders whether that process was produced or not?

A. A little on the revolution.

Q. Principally upon the heat and skill of the operator?

A. And in adjusting it, softness, &c. I found it could be adjusted either way, as I supposed it could.

Q. Are you willing to show to this jury that experiment—that in any other way you can wipe the rubber off the cylinder, except by having the cloth pass round the slow and the rubber round the fast?

A. I think I could do that without any difficulty.

Mr. BRADLEY. We should like to have that done by this or any other witness.

Mr. JENCKES. What is the question?

Mr. BRADLEY. Of wiping rubber on to cloth, unless you have the cylinder with the cloth going slow and the other fast, which is the gist of the Hayward patent; or show it to any witness or the jury, and come into court and swear to it.

Q. Can you cover both sides of the cloth by the Hayward process or not?

A. By the Hayward process there would be no possibility of covering both sides except by—do you mean to be understood as covering both sides by passing it through the pores?

Q. I do not mean that; I mean the simple fact of coating the rubber on different sides of the cloth by the Chaffee process, or by the Hayward process?

A. By one operation?

Q. Not one operation.

A. Oh, two? Both machines would do that.

Q. Thin rubber; so you think?

A. No doubt about that.

Q. Rubber without a solvent?

A. I have no doubt of it.

Mr. BRADLEY. If you will do that with the Chaffee machine, before any witness, you may have that witness come and state that to the jury.

Q. Where does the coloring matter go in by this process? (Chaffee model.)

A. It goes in between the cylinders.

Q. Which way do these cylinders work?

A. Inward I think. (The upper surface of the upper roller moving inward.)

Q. Suppose you look and see if it is not outward.

A. Possibly it is; shall I stop to examine?

Q. Certainly.

A. (Examines the specifications.) I do not see that it states which way they revolve; possibly I may find it by reading further.

Q. Now I will ask you, which way do they revolve?

A. By reading carefully I may find it; I do not see that it states which.

Q. You put the rubber on there (on the apron)?

A. You may do it so; I do not know that it is stated.

Q. You do not know where the rubber is applied; assume then that it is applied on the apron, and is then carried between these two cylinders?

A. I do not know that either is stated; I can examine if you wish.

Q. Now it does go through the rollers, and you state that the coloring matter would be mixed in between them?

A. I said probably; I do not know.

Q. On the contrary this large roller revolves this way? (outward).

A. So it appears by that statement.

Q. Now, when the coloring matter drops on to that large roller, would not the revolution carry it right over and drop it off?

A. Provided it moved that way; if it moved the opposite way it would carry it right into the grinders.

Q. Then the coloring matter drops down here? (upon the apron).

A. This makes more definite another question you asked me some time ago in relation to how they revolve. If the cylinder moves as you state it, then I should apply the coloring matter in another way; if it is intended to move the way that I first stated, then the coloring matter would pass between the cylinders and the rubber also, the cylinder would then, as I stated before, revolve inward (upper surface inward).

Q. That is to say, if the cylinders move different from what they are stated in the specification?

A. I do not know how it is stated in the specification.

Q. In the drawing?

A. That drawing does not state which way they revolve; it states where the rubber is.

Q. Does not this drawing show the course which the rubber takes? Then we all read this differently from what you do—Mr. Jenckes, his Honor, and myself.

A. It does not state whether it goes backward or forward.

Q. (By the Court.) The rubber is put upon the apron and so carried up on to the roller; unless, therefore, the roller revolves inwardly, the coloring matter would be carried on to the apron instead of from it?

A. That would be so; and I should think that a mistake if I was reading it from a description.

Q. Does not the specification say the rubber is cut up into small pieces and put upon the apron?

A. (Referring to the specification.) Yes, sir.

Q. And from that apron it is taken in between the cylinders?

A. It says it is then spread upon the apron that conveys it to the cylinder; that is all I gather from that description.

Q. If it conveys it to the cylinder, which way then must the cylinder (upper one) revolve to grind it?

A. Well, I do not know; if it is conveyed from the apron to the cylinder in that position, how it could well be ground at all; and I should say there was a mistake in the description, unless you turn it upside down.

Q. You say you cannot state which way the rubber should be taken?

A. I cannot understand that description at present.

Q. You have testified that sundry machines were identical with the Chaffee machine, and sundry exactly the reverse?

A. They are.

Q. And now you cannot understand the Chaffee machine?

A. I cannot understand that description, yet I understand the machine itself by the apparatus. I know which way they should revolve, but I do not understand the description.

Q. Which way should they revolve?

A. I think they should revolve this way (upper surface inward).

Q. That is where the rubber is put on the apron?

A. No; that is where the rubber and coloring matter are to be ground.

Q. How would you get the rubber in there?

A. By changing the position of the apron; I would put it above instead of beneath.

Q. Which way should it revolve in your opinion?

A. I think at present, the best mode would be inward, and that the apron, in order to apply the rubber, would be at the top instead of the bottom.

Q. Suppose you apply it at the bottom, which way would it revolve?

A. I do not see well how it can be applied at the bottom. In that case, I think it should revolve in the opposite way—outward.

Q. In that case where does the coloring matter go to?

A. I do not know.

Mr. RICHARDSON here stepped up to the witness stand, and replacing the bars where they belonged, on the top of the upper roller, said: Perhaps you may as well put these bars on, as leaving them off would mislead.

WITNESS. With these bars on, there is a sensible idea of mixing the coloring with the rubber, which I could not see without them. It is this: by revolving outward, without the bars, the coloring matter would come in contact with the rubber, and actually be dropped off before there was any friction upon it whatever; but with the bars, as the rubber and coloring matter come in contact they are ground by the bars themselves—the bars pressing on to the roller.

Q. (By the COURT.) The bars answer the purpose of another cylinder?

A. Yes, sir. That gives a new view to the matter.

Q. Have you ever seen this machine operate with the bars?

A. I never saw it operate. I should think it would operate, but not so well as without.

Q. In those experiments you made the other day, did they attempt to do it with the use of the bars?

A. I never saw those bars.

Q. Never saw that attempted?

A. Never saw that attempted.

Q. Do you not know that Day himself made vulcanized shoes with camphene, and advertised them in the market as the best that could be made?

A. I do not know of that fact.

Q. Can you tell me, as an expert, which of these samples is done with the Hayward and which with the Chaffee machine?

A. No, sir; it is impossible for me to say. I think they can both be done with either of the machines.

Q. Is that a vulcanized shoe? (handing him a shoe.)

A. I should think it was not. I should think it was an attempt to vulcanize, but imperfectly done.

Q. Has it camphene in it or not?

A. I think it has had either camphene or other matter of similar properties, or resins.

Q. How long has that shoe been made, according to your judgment?

A. I have no judgment on that subject. I can imagine it might have been done one day, or it might have continued in that state for six months.

Q. Can it be possible that it is six or seven years old?

A. I should not be astonished that it was.

Q. You would be astonished if it was vulcanized and made with camphene?

A. I should be astonished that it was vulcanized; but that there has been an attempt to vulcanize it would not astonish me.

Q. What is the test of vulcanized rubber?

A. It is a little more porous, more elastic, and I do not know but a better test, less subject to the action of heat and cold.

Q. What is the meaning of porous?

A. It means more open, permeated by air holes.

Q. More penetrable by air and water?

A. So far as the organic structure is concerned. The holes may pass entirely through it or partially.

Q. Do you speak practically?

A. I speak practically and theoretically, both one thing. Take two rubber bags of the same thickness, one vulcanized and the other not, and the one not vulcanized may hold common air and gases of various kinds, while the one

vulcanized would not hold it so well; it would be so porous that the gases would escape from it.

Q. I think I asked you a question whether vulcanized shoes were made with camphene? Here is a shoe, is it vulcanized?

A. I should think that shoe was pretty well vulcanized, and had a considerable portion of bitumen in it, enough to have given it a gloss and odor; a very offensive odor when much is put in, but I should think there was very little in that.

Q. You call that a vulcanized shoe?

A. It may be; I should suppose it has passed through the process of heating in combination with sulphur, what I understand by vulcanization, though not very thoroughly vulcanized.

Q. Vulcanizing is passing the rubber through heat?

A. Rubber, in contact with sulphur subjected to heat, produces vulcanization, provided there are no foreign substances present to prevent the peculiar action of the sulphur, which I do not feel able to explain precisely; but it is something like an astringent, drawing up the particles of rubber, and bringing them more into cohesion, making it more porous, tough, and elastic.

Q. Drawing them closer together makes the rubber more porous?

A. It does. It brings some parts closer, more in chemical contact, while there would be a separation in other parts which would make it porous.

Q. What is the vulcanizing process?

A. I have already endeavored to describe it. It is the action of sulphur at a heat between 250 and 300 degrees upon the rubber.

Q. You say any foreign substance would injure it?

A. I do not say any, but many do. A large quantity of turpentine would prevent its vulcanizing.

Q. What else do they use, in making vulcanized shoes, besides sulphur?

A. I think there is really nothing that adds to its quality, as regards goodness; there are some things that give a fine color, and other things that give great weight and bulk, such as chalk, gypsum, and, I think, lead, and the carbonate of lead.

Q. Is lead essential?

A. It is essential for one purpose only—or for, perhaps, another unimportant purpose, to wit, for the surface. The surface of the rubber seems to be a little softer than with most other materials that I have seen used. I do not think it serves a very important purpose. Besides, the color is a little changed with the carbonate of lead. There is this one general purpose that lead or any thing else that is not absolutely injurious might serve. It is that any matter like lead, chalk and even common sand, if very finely powdered, by being ground with India rubber, separates the molecules, as it were, it mixes in and thoroughly mixes up, and so permeates the mass that when it is required to have the action of sulphur, the fumes of the sulphur can permeate and reach, as it were, inside of every part of the rubber, which it otherwise might be shut out from and could not reach, unless these avenues were open by lead, chalk, or some other matter, separating the molecules.

Q. Do you know whether the cloth used in Chaffee's manufactory for shoes is coated on both sides or not?

A. I do not know.

Q. We would like to have you take a sheet of cloth and put a thin coat of rubber on both sides, like this specimen (handing him a specimen), with the Chaffee machine, in the presence of somebody.

A. I presume I could do something like this.

Q. That indicates the thickness?

A. A little thicker or thinner would do, I suppose.

Q. We want it exactly suitable for the linings of shoes?

A. Similar to this.

Mr. JENCKES. Suppose you furnish also a piece of cloth without the rubber.

Direct resumed by Mr. Richardson.

Q. There was something said to you in relation to the screws for the spreading part of this machine; are they not described in the specifications and drawings?

A. They are on the drawings, most assuredly; they may be in the specifications, but I do not recollect them.

Q. Look at line 28.

A. They are described at line 28.

Q. (Reads), "G. G. are screws regulating the pressure of the rollers." Now will not the rubber in passing through these rollers separate them sufficiently for any width of rubber?

A. Certainly.

Q. Don't these screws serve to keep it in its proper place?

A. They do; you can fix them any thickness.

Q. Have you ever tried any experiment with the dead oil of coal-tar?

A. I have tried experiments with coal-tar, with the naphtha in dead oil and all together.

Q. When you were speaking of your knowledge on that subject, did you speak from what you had read as well as from your experiments?

A. Both from the books and experiments.

Re-cross-examined by Mr. Bradley.

Q. Do you refer to any book besides Dr. Ure's?

A. I refer to every book that treats of solvents.

Q. I do not know what they are.

A. I have been to both libraries here, and they have got no books of modern date, such as I have been accustomed to refer to.

Q. (By Mr. Richardson.) In your own library what do you refer to?

A. I cannot recollect even which of all the works treats on this subject, but there is a very excellent work, called Turner's Elements, edited by Gregory and Liebig.

Q. The work of Turner does treat of it?

A. It does, and it is a very accurate and reliable work. I think it treats of caoutchouc, and states that naphtha is a solvent, but not that dead oil or coal-tar is. And furthermore, I assert that no book treats of coal-tar as a solvent. I think another good authority is Wood and Bates' U. S. Dispensatory. I cannot find in this city a late edition of that work.

Q. What is the operation of those "G. G." screws? Can you do any thing with them but press down the cylinders?

A. The pressing down of one cylinder is the pressing down of all.

Q. The operation is to press all of them down?

A. Or let them up; loosening the screws allows the cylinders to be forced up as by a lever.

MR. MARING RECALLED, AND EXAMINED BY
MR. RICHARDSON.

Q. You said there was something in your testimony you wished to explain. I did not inquire into the particulars of it, but you can explain it.

A. It was something in relation to a question in the cross-examination by Mr. Bradley. I either did not understand the question, or he did not understand my answer. I think he asked me what the effect of pure rubber would be on the outside of cloth, exposed, and I answered that at that stage of the business it would be useless. I feel as if I ought to qualify it.

Q. Make your statement.

A. Pure rubber, from my experience, made by machinery or any other way, exposed to the air, would not stand the weather, sun, &c.; that is pure rubber, without any mixture that I know of. I have no experience to prove to me that it would stand.

Q. How does that differ from what you said before?

The COURT (to witness). You were asked in that connection what would be the effect of putting pure rubber on the outside?

WITNESS. Well sir, then the answer would be, pure rubber on the outside I think would not do.

Q. How would it stand exposed to the air without being exposed to the sun?

A. I think in the open air, where there is a very free circulation, it would become dead; probably kept in the shade, shut up in a chest for instance, it would stand.

Q. Did you ever see any rubber compound or preparation that would stand the sun without injury for a considerable length of time?

A. Vulcanized rubber I cannot answer any thing about, but from my experience I think I could prepare rubber with rollers, and with certain mixtures that would stand.

Q. I have asked you what you have seen; have you ever seen any goods that would stand the sun; if so, where were they made?

A. I think I have made them where they have stood the sun a year.

Q. Where?

A. Here and in Cranston—more particularly in Cranston.

Q. Were they vulcanized?

A. No, sir.

Q. Prepared by machinery?

A. Yes, sir.

Q. What was compounded with them?

A. Lampblack.

Q. Then, if lampblack is compounded with the rubber, you think it will stand the sun?

A. Yes, sir.

Q. The shoes made at Roxbury, after the Chaffee machine came into use, had lampblack in them?

A. No, sir.

Q. What did they have to substitute for it?

A. Nothing.

Q. Made of pure gum?

A. Pure gum.

Q. The surface of them was not exposed?

A. The surface was not exposed.

Q. You spoke the other day of some bad shoes made at Roxbury; do you know what became of them?

A. I do not precisely; I saw them once in Providence.

Q. Did you see them in possession of Hartshorn?

A. I saw them in that establishment, either before or since Hartshorn went into it; I am not positive.

Q. Who made those shoes originally?

(Objected to, as going into the examination over again.)

Mr. RICHARDSON. The witness did say to me that he wanted to explain upon these two subjects, without telling me what the explanation was. I thought it was regular, because that was one of the subjects about which he wished to explain.

Q. If you have any explanation, make it?

A. I hardly know what I did say; I recollect well of saying that those shoes were good for nothing, which were made at Roxbury, under the direction of Goodyear, by myself and others. That question was put to me on the cross-examination; how much I explained about it I am not certain; but there were reasons why they were good for nothing, and would not sell in the market. I advised Jackson, who started the business here, to purchase them, and destroy them if he could get them, because they would injure his business. After I left the stand I thought of it; I supposed the question was asked me for some purpose; I felt as if I ought to explain, so as to leave an impression that would be correct.

EDWIN M. CHAFFEE, SWORN AND EXAMINED BY
MR. RICHARDSON.

- Q. Where do you reside?
A. I am residing in Providence.
Q. What is your business now?
A. Manufacturing India rubber shoes.
Q. (By Mr. BRADLEY.) Have you any interest in this suit?
A. I have no interest in this suit.
Q. How long have you been engaged in connection with the India rubber business?
A. Since 1832, as a business,—a manufacturer.
Q. How long before that were you connected with it, experimenting in any way?
A. I have made, or seen experiments made, as early as 1828.
Q. You commenced experimenting in 1828, where?
A. In Boston.
Q. In connection with what manufactory, or with whom?
A. That was my patent leather factory. I saw Mr. Britton make some experiments of solution of India rubber, and made some myself.
Q. For the purpose of making patent leather?
A. And I applied it to cloth.
Q. You commenced, then, to apply it to cloth in 1828, in a patent leather factory?
A. I did.
Q. Where did you next go from there?
A. To Roxbury.
Q. Under what circumstances? what employment?
A. I went into the patent leather manufacture in the first place.
Q. Who carried it on?
A. Mr. Lemast and Samuel Meyer.
Q. At what time was the India rubber business commenced there?
A. I experimented there in 1831 and '32.
Q. What were your experiments there?
A. I there ascertained in my experiments that lampblack would preserve India rubber from decomposition when exposed to the action of the sun, which I never had before seen done in my experiments or those made by Mr. Britton.
Q. What took place about the India rubber factory? how did it come into existence?
A. After I had made machinery for grinding and preparing the India rubber, and spreading it upon cloth, and made some pieces about five or ten yards in length, I exhibited them to parties who were anxious to become interested in the matter.
Q. How early was that?
A. That was in the spring or summer of 1832.
Q. Tell us what that machinery you made for grinding and putting rubber upon cloth was?
A. The machinery for preparing rubber consisted of one cylinder working in a sort of hopper, that contained the rubber in solution—containing it upon the top of the cylinder, and acting against one side of the hopper,—the rubber became partially ground, and mixed more evenly, while the other side of the hopper acted as a doctor or scraper, scraping it out from the cylinder.
Q. That was the rubber in solution?
A. It was partly in solution; rather a thick, pasty state.
Q. How did you produce that pasty state at that time? What was known in the arts about it?
A. I had never seen any thing brought into that state before. Other experiments had been made with larger proportions of solvents, so much so that the rubber readily decomposed in the sun, and soaked into the cloth.

Q. At that time how much solvent did you use?

A. I began with about a gallon to the pound.

Q. Before that they used much more?

A. Somewhat more; at any rate the solution was much thinner than mine was.

Q. How did you spread it on the cloth?

A. By a sort of machine, called the knife machine.

Q. Describe how it was made?

A. It was made, with one large cylinder at one end of a large frame, and two small rollers at the other end, placed one above the other. The cloth, in an endless web, was made to revolve around them, and a knife was brought against the cloth, between the two small cylinders; the knife formed the bottom of a sort of hopper or box, into which the pasty composition was put, and, by tipping it up, I brought it in contact with the cloth, and the knife took off all the superfluous quantity of the paste which did not adhere to the cloth.

Q. You say you exhibited some of that cloth?

A. I did.

Q. To whom?

A. To Mr. Haskins in the first place, and Mr. Chester Guyon afterwards.

Q. Did you show it to Mr. Goodyear at that time?

A. I did not.

Q. Did you know Goodyear at that time?

A. I did not.

Q. What did they do about the factory?

A. They exhibited it to others,—Mr. Baldwin and Mr. Rynex,—and some conversation was had about going into the manufacture.

Q. Did they go into it?

A. They did.

Q. At what date was it started?

A. It was in the fall of 1832.

Q. Were you from the first employed by that Roxbury Company?

A. We associated ourselves in the business of manufacturing, and I was in the employ of those parties.

Q. Did you make good goods, or were they defective, and if defective, how?

A. They were good goods.

Q. How long did you manufacture them?

A. Up to 1835 or 1836, when my new process was put into operation.

Q. Did any of the goods come back defective?

A. I never knew any of them come back defective or damaged till a later period, when some poor materials were used.

Q. At what time did they first begin to become defective, and what was the cause of it?

A. I think in 1834 I had noticed it—perhaps in 1835—some of them came back; I cannot be sure as to the date.

Q. What was the cause of it?

A. It was owing to using a very poor quality of gum; good qualities had become scarce, and were not to be obtained by the agent—so he reported. A very poor quality of slab gum, as it was called, was used, which I believe to be the cause of the decomposition.

Q. In that factory, how many barrels of solvent did you use in a day along in 1834 and 1835?

A. About five or six barrels a day.

Q. You are the inventor of this process patented here?

A. I am.

Q. When did you begin to make experiments for the purpose of perfecting and carrying out that experiment?

A. I made experiments as early as 1832 to diminish the quantity of solvent, and continued along up till I made this invention, to make experiments at various times.

Q. When did you first discover that you could dispense with all solvents by means of machinery?

A. In the winter of 1834 and '35, or perhaps in the spring of 1835; I cannot give the exact date.

Q. When did you discover that you could dispense with a large portion of the solvent?

A. I had experimented with less solvents for a year previous to my making the discovery of using no solvent.

Q. Had you a machine at the time you made the discovery, that you could succeed without any solvent?

A. I had a machine that I then used.

Q. What was that machine?

A. It was a set of calender rolls—three rolls, made for the purpose of experimenting on India rubber.

Q. Made or prepared by you?

A. Made by me—made at my order.

Q. (By the COURT.) What time?

A. I had this machine in 1834; they might have been ordered as early as 1833; they were put in operation in 1834.

Q. What time in 1834?

A. I cannot say how early; I recollect their being in operation in the spring of 1834; that is the best of my recollection.

Q. How did you arrange them to run?

A. The two bottom rolls were geared together; the top one had no gear attached to it.

Q. How large rollers were they?

A. The bottom and top were about twelve inches, and the middle one about eight inches; all five feet long.

Q. How were they geared?

A. The two bottom rolls were geared to run with an equal motion on the surface; the top one had no gearing attached to it, but moved by contact with the other roll, or by contact with the cloth or whatever was between them.

Q. Did you grind rubber without a solvent in that?

A. I did.

Q. At how early a time did you first discover that you could grind rubber in these rolls without a solvent?

A. I think it was early in the spring of 1835.

Q. You had used that with a solvent up to that time?

A. I had.

Q. How did you discover it—by accident or a series of experiments?

A. By a series of experiments. I submitted pieces of India rubber to the action of rollers, to see what effect it would have upon it; I found that by passing it several times through, it soon became into a pasty state, so much so that it formed a sheet upon one of the rolls.

Q. Did it go through the next roller that had no gearing?

A. Yes; it was placed between the top and middle roll part of the time; the top roll would not move at all when a large quantity of rubber was between them; when the quantity became small, the top one did move by reason of the ends of the roll coming in contact; they sprung considerably—were not stiff enough, and the ends of the roll coming in contact, the top roll moved slowly while the others moved fast.

Q. When you made that discovery, what did you do in reference to your next machine?—did you continue to use that or make another?

A. I used that for experimenting; I found that it was not stiff enough to do pieces of full width, and immediately ordered a large machine to be built for the purpose of carrying out the new invention.

Q. Where did you do this?—was it in a private room?

A. It was in a private room.

Q. Did you keep it secret?

A. I did, as much so as possible.

Q. Was there or not at that time much inquiry among India rubber men, in relation to the secrets of manufacturing, and much excitement about it?

- A. There was a great deal.
- Q. State how it was in relation to selling secret receipts in the trade—do you know any thing about it?
- A. I know only from hearsay.
- Q. Hearsay at that time in the business?
- A. Yes, sir.
- Q. All the rubber factories you know of kept secret their compounding rooms?
- A. I was so informed, and believe.
- Q. How was it with the Roxbury factory?
- A. It was kept secret there as much as possible; the hands were all put under bonds, and men in the different departments were not allowed to go into the composition room.
- Q. At what time in 1835 did you order a machine to carry out your experiment upon?
- A. It was in the spring; I think in April, as near as I can remember.
- Q. When was it done?
- A. It was delivered some time in the fall—portions of it at various times.
- Q. Is that (Chaffee model) an accurate model of it?
- A. The general conformation resembles it pretty well; it was made in two detached parts, arranged in nearly the same order.
- Q. The one you speak of now, was it the monster machine?
- A. The monster machine.
- Q. Was it made in two detached parts or whole, like this?
- A. In two detached parts.
- Q. Did you make your drawings and send them to the patent office before that machine was made?
- A. No; the drawings, if I remember right, were made from the model instead of the machine.
- Q. Was your original model all connected together like that?
- A. I think it likely, though I cannot be positive. I have no doubt this (drawing) is a correct representation of the model at the time, made in separate parts.
- Q. One for spreading and the other for grinding?
- A. Yes, sir.
- Q. You say the monster was not attached together by bars, but made in separate parts?
- A. Yes, sir.
- Q. Did it stand together in the factory like that?
- A. Much in the same order of arrangement—pretty near together, one in the rear of the other.
- Q. In what state did you put the rubber into the grinding part of the machine—raw, or compounded with other things?
- A. I put it in raw, in the first place.
- Q. How did it go in according to your specifications and according to practice?
- A. It went in here, (pointing to the apron,) between this cylinder and that large one, and was delivered out on the other side.
- Q. Where did you put the compound in?
- A. The lampblack was sifted in between these bars and fell down through.
- Q. Whatever you put in was between?
- A. Yes, sir; the gum that left this cylinder would commonly pass in fine threads, or a sort of net-work, more commonly, beneath these bars, and the bars would also divide it in a similar manner into a sort of thread and net-work, and it incorporated the lampblack as it passed around.
- Q. The bars operated as rollers then to incorporate the compound?
- A. It did; that was the object of substituting the bars for a roller.
- Q. Were the other rollers heated?
- A. They were.
- Q. Was it a part of your process to heat them?

A. It was.

Q. When you got the monster machine done, and put into use, did you want any thing to cool the grinding-rollers?

A. We did not.

Q. Why not?

A. They would generally lose rather than gain heat; it was necessary to keep the steam all the time passing through these cylinders; it never was shut off.

Q. Where did the steam come from?

A. It was the exhaust from the steam-engine.

Q. Could you heat it up to two hundred degrees?

A. About that; I had no means of ascertaining precisely what it was.

Q. You say they would grow cold from friction, rather than too intensely hot?

A. Yes, sir.

Q. Was there ever any practical difficulty when you used that machine at Roxbury, in grinding rubber, on account of the cylinders getting too hot?

A. Never.

Q. How long did you run the monster machine yourself, at Roxbury, for grinding rubber?

A. I always used it till I left there.

Q. What time was that?

A. It was in 1838 or '9.

Q. State whether during the time from 1835 to 1838 or '9, you had any cooling process attached to the grinding-rollers?

A. We never had.

Q. Was it necessary?

A. It was not at all necessary.

Q. What was the reason?

A. Because the heat never rose above the degree of temperature necessary to work properly, by friction or any other way.

Q. Was there ever any cold water introduced into the spreading-rollers of the monster machine while you had charge of it?

A. There was none introduced at first into any of them; at a later period—

Q. At what time?—give it as near as you can.

A. In the Fall of 1836, as near as I can remember, water was introduced into the bottom cylinder.

Q. State the reason and object of that.

A. The machinery was imperfectly made; the rollers were so large that they had no gauge-lathes to turn them in where they were made, and they were imperfect—not straight, and would spread a thicker coat in one place than another, and it made some little difference in the appearance of the surface of the cloth. Then two coats were put on. Where the gum was thicker in one place than the other, it would be forced into the cloth, and show itself on both sides and in streaks, and the object of putting the water in was, to keep the bottom roll cold and the cloth cold during the time that the second coat was going on; because where this stripe of thick coat was going on, it would bank up, as we call it; all the gum would not go through smooth and even; it would crowd there and disturb the coat already upon the cloth, which was cool, and make a rough streak through the cloth. Before introducing the water, that was the case; after introducing it, it was improved in that respect. We several times ran our steam-engine for two weeks at a time, grinding those rolls to bring them to perfection, and got them somewhere towards perfection at last; but at first there was that imperfection about them.

Q. Was that the reason of introducing cold water into the spreading-roller?

A. That was the reason; there was no other occasion for it whatever.

Q. If the rolls had been smooth, properly adjusted and turned, would there have been any necessity for cold water in the spreading-roll at all?

A. None in the least.

Q. Do you use smaller rolls at the present time for grinding and for spreading, than pointed out by your patent?

A. Smaller rolls for grinding, and sometimes smaller for spreading, and sometimes larger; I use various sizes.

Q. If you use smaller rollers, is the cold water necessary or convenient?—how is that?

A. If smaller rollers are used, they are more likely to become very hot than large ones; they oftener come in contact with the rubber, where the heat is generated; the surface often comes in contact where the heat is generated, and the temperature, of course, rises faster, and it presents also less surface to the cooling action of the atmosphere which surrounds them.

Q. (By the Court.) Did you state that you did use smaller rollers afterwards for grinding?

A. I did.

Q. How much smaller?

A. I have used them as small as eight inches in diameter.

Q. How long did you use them at that size?

A. I had some of that size in use at Roxbury all the time I was there, up to 1839, the latter part of the time. They were not in use at the time this machine was constructed and patented.

Q. What was the object of making the smaller rollers at Roxbury, or any where else where you have used them?

A. I made them smaller in that instance for the sake of getting them made as early as possible, and thinking they would answer the purpose, and if they did not, there would be less loss; it would prove to be a mere experiment.

Q. How many other machines did you have at Roxbury for grinding and mixing?

A. There was one there besides those I mentioned which we sometimes used.

Q. Did you cool these off with cold water, these small rollers?

A. I had no cold water, no way of introducing cold water into it. It was a solid roller.

Q. Did that operate well?

A. They would not operate well for a long continued time; they became heated, or it became heated. There was but one of them acting against a solid plate of iron.

Q. Could you make good goods with that?

A. I prepared rubber very well from it while I used it. It was for preparing only.

Q. Did you ever use any smaller rollers than this (referring to the model) for spreading at Roxbury?

A. I have used smaller than that; that I had at Roxbury; never, perhaps, smaller than the smallest in that machine, however, in diameter. I used shorter ones almost always.

Q. How large must the roller necessarily be to have sufficient strength to grind rubber? What is the smallest size?

A. The diameter must be proportioned to the length.

Q. Suppose they are five feet in length, how large must they be?

A. They should not be less than sixteen inches or so in diameter.

Q. Why must they be so large?

A. They will spring badly if they are not; and they will, if they are small, run faster and heat more, as I said before.

Q. If they are five feet long, and six inches in diameter, is that sufficient strength to grind the rubber?

A. Not sufficient strength. There are various other reasons: if they are too small the next rollers will not be strong enough to give force to turn the rollers.

Q. Do you use cold water in your rollers in your factory?

A. We do occasionally.

Q. Why do you use it?

A. It is used to get the temperature right, in case they neglect and let it run too high at any time.

Q. Do you use smaller rollers than you originally planned?

A. Not smaller, in proportion to the length.

Q. They are less in diameter?

A. I am not sure but they are the same size, however, in diameter; I think they are.

Q. Thirteen and twenty-seven inches?

A. They were all one size—all 18 inches, if I remember, that I use now.

Q. Is the cold water absolutely essential to the business?

A. I do not consider that it is.

Q. Can you go on and make the rubber goods well without cold water?

A. I can.

Q. Can your mechanics in your factory?

A. They can.

Q. You say that these grinding or spreading rollers at Roxbury never would heat high enough to become any annoyance; why would yours at your factory?

A. The spreading rollers might have been too hot at Roxbury if we did not take care to stop the steam off at the proper time.

Q. If you stopped the steam off at a proper time, they never would become too hot?

A. They never would.

Q. Would they at your factory now?

A. No, they would not.

Q. Have you dispensed in your practical use of your process with the use of bars?

A. I have.

Q. State how you use it now, and wherein it differs, if it differs at all?

A. Our method now is to grind with two cylinders only, passing the gum and mixture, whatever it is, between them, both together.

Q. Why is that?

A. We conceive it to be as good a way as any that there is now, to use it.

Q. Did you use any of your grinders at Roxbury without bars?

A. We did.

Q. Did you before you applied for your patent?

A. No, I did not.

Q. Who drew up your specifications originally?

A. I made the original draft, and Mr. David A. Simmons put it in proper form—re-wrote it.

Q. State whether the result will be the same whether you use these bars or the two rollers, and put in the coloring matter between the rollers?

A. It would be the same.

Q. Is there any substantial difference between one and the other?

A. I do not conceive that there is; they would both mix the coloring matter in.

Q. There seems to be some screws on this machine for adjusting the rollers; will you state how they operate?

A. These screws are to keep the upper rollers down upon the others. The gum between the rollers would always separate them at the proper distance.

Q. Did you find any trouble in its practical operation?

A. Never.

Q. The screws adjusted the rollers at a proper distance, to prevent the gum spreading them too far?

A. It was necessary.

Q. By that you mean to state that the adjusting of the screws determined the thickness of the gum as it rolled it out?

A. It did.

Q. Would it do it accurately?

A. It did—any degree of thickness that we desired.

Q. State whether the rubber was spread, in the ordinary course of business, when you commenced your process with your machine, directly upon the cloth, or whether it was first made into a sheet of rubber?

A. It was first made into a sheet of rubber; that is for some of our goods; we oftener used it that way than any other.

Q. Then at how early a time did you commence by your machine to make rubber into sheets?

A. We commenced at the earliest period to form a sheet on the roll, and at a very early period the sheet of rubber was wound up around a roll of cloth; after the cloth had passed through, the sheet followed on, being attached to the end of the cloth, and wound up as the cloth had done before, on the outside of the cloth.

Q. State whether that is the way car-springs are made at the present time?

A. It is; the sheet is rolled up in this manner.

Q. Did you make goods with that machine in 1835 and '6?

A. I did.

Q. How did the goods prove?

A. They always proved good; I never knew any of them to do otherwise.

Q. Did you become acquainted with the process of vulcanizing rubber at any time?

A. I did.

Q. When did you first become acquainted with Charles Goodyear?

A. In 1837.

Q. When did you first become acquainted with his process of vulcanizing rubber?

A. Somewhere about 1839 or '40; I cannot now fix the date.

Q. Before he got his patent?

A. Yes, sir.

Q. Can vulcanized goods be made successfully without using your grinding and spreading process?

A. I do not think they can.

Q. Tell us why?

A. The difficulty formerly was when that process was used, that a very large proportion of the goods were entirely spoiled in process of vulcanization.

Q. What spoiled them?

A. They would most commonly blister—be very much damaged by blistering; nine-tenths of Mr. Goodyear's experiments were spoiled whilst he was using the camphene process.

Q. Did you work with Goodyear at that time?

A. I was with him through the winter of 1844, I think, while he was experimenting in Springfield.

Q. Have you ever been employed by him to make experiments in rubber?

A. I have.

Q. How many years or months have you been employed since 1837, in making experiments, as near as you can tell?

A. I have experimented for him myself—all the time, more or less, in his employment—perhaps two years in all.

Q. Did you work on a salary?

A. Under a salary.

Q. Did you every make any experiments for Goodyear in reference to the use of coal-tar?

A. I did.

Q. For how long a time did you continue your experiments for Goodyear, in reference to the use of coal-tar in rubber?

A. I experimented from 1850 to 1852.

Q. Has there been a patent taken out in Europe or England, for the use of coal-tar in rubber, founded upon your experiments?

A. There has been.

Q. Who applied for it?

A. Mr. Goodyear.

Q. Will you state why it is that India rubber goods made by the camphene process could not be vulcanized, and how it operates in practice?

A. In practice it is very tedious and difficult to dry out the spirits of turpentine; there is always more or less of it remaining in the goods, and very liable to blister.

Q. What is the cause of their blistering?

A. It is owing to the camphene which is in the compound, as I conceive.

Q. What is blistering?

A. There are gases apparently within the body of the gum, which expand so rapidly, as to swell out the India rubber into blisters, all throughout the body, and sometimes into a complete sponge. Camphene is employed to make sponge—goods that have a good deal of camphene in them will make what is called sponge-gum—what Mr. Goodyear terms sponge-gun.

Q. State whether you made experiments that led to these hard goods—combs, &c.?

A. I did early—

Objected to, as going into a new subject; question allowed.

Q. You can state whether you made experiments which resulted in making hard articles?

A. I did make experiments which resulted in a hard compound.

Q. Where did you make them, and when?

A. I made some at Naugatuck, some at New Haven, and some at Providence.

Q. State whether you used coal-tar with them?

A. I did—those in Providence.

Q. When did you use coal-tar for any purpose connected with India rubber?

A. I think in 1849 was the first I used it.

Q. Where did you use it?

A. I made an experiment with it at New Brunswick.

Q. What was the purpose of it?

A. The purpose there was simply to see the effect of it upon India rubber.

Q. State whether you ever knew it as a solvent for India rubber?

A. I never did.

Q. Have you ever used it for that purpose?

A. I never have, except to see what effect it would have.

Q. What effect would it have upon the rubber?

A. Well, sir, in small quantities it did not seem to have any effect at all scarcely; in large quantities it would somewhat soften it to a very tarry mixture; the rubber seemed to be something like a substance by itself, floating or separate from the entire mixture.

Q. When you used large quantities in the India rubber alone, could you afterwards bring it into any state for use?

A. I could not for any practical purpose.

Q. Do you use it now in connection with your rubber works in small quantities?

A. I do.

Q. What do you use it for?—what is its object?

A. One object is for japanning, another is to improve the quality of the goods after they are completed.

Q. Wherein does that improve the quality?

A. It lessens the liability to bronze, and lessens the liability to bloom or turn white.

Q. Suppose you take one of those little tin cups, holding about a gill, and fill it full of ordinary coal-tar, and put it on the rubber in the process of grinding, when the raw material and compound are grinding together in the machine—say a batch of 12 or 14 pounds—will it have any effect as a solvent?

A. It will have no sensible effect as a solvent.

- Q. Will it do any good applied in that way to prevent this bronzing?
- A. I think it will.
- Q. Tell the jury what bronzing is?
- A. India rubber sometimes, after it is heated, has a sort of silvery appearance or lustre upon the surface; if the rubber is varnished it has quite a lustre, if it is not, it has a dead metallic look, without any great gloss to it.
- Q. Is the article of India rubber car springs made to any great extent in this country?
- Objected to.
- Mr. RICHARDSON. I only want to ask the question whether car springs can be made without the Chaffee process, and as to the extent of the business in the country.
- Question allowed.
- Q. State whether it is a very extensive business.
- A. It is very extensive.
- Q. Can vulcanized car springs be made without your process?
- A. They cannot.
- Q. Is the manufacture of India rubber belting an extensive business?
- A. It is.
- Q. Can that be made without your process?
- Q. I should think not in any profitable manner. I should say the same of car springs.
- Q. When, according to your knowledge, did the India rubber manufacturers, if ever, first generally embrace the full use of this process of vulcanizing?
- A. They embraced it in 1844—commenced using it in 1844.
- Q. At what time did it get into general use, dispensing with the solvents?
- A. I am not certain whether it was used as early as 1844; perhaps it may have been 1845.
- Q. It was used as early as 1845?
- A. In 1846 and '7 it was used generally.
- Q. Were you acquainted with the factories under Goodyear's control?—did he have any in 1845, '6, '7 and '8?
- A. He had none at that time; he was at work at Roxbury, I believe, operating there at that time. In 1844 he was operating in Springfield, if I remember right.
- Q. Where was Goodyear in 1847 and '8?
- A. I do not know where he was experimenting then; I should think in various places—N. Haven and Naugatuck.
- Q. Where was he in 1849 and '50?
- A. He was in N. Haven in 1850.
- Q. Did he have any factory there?
- A. He had.
- Q. What was it called?
- A. I do not know the title by which it went; he hired the steam power of some steam company or corporation.
- Q. Did he manufacture goods there?
- A. He did.
- Q. What did he manufacture?
- A. A great variety of goods, some carpeting, maps, globes and some clothing.
- Q. Where was he in 1850?
- A. He was at New Haven in 1850, some of the time, and some of the time at Naugatuck.
- Q. Was the factory at Naugatuck under his control?
- A. He was operating at Naugatuck before he operated in New Haven, at this place I have been speaking of.
- Q. What was the name of the Naugatuck Co.?
- A. It was the Naugatuck India Rubber Co.
- Q. What goods did they make there?
- A. They made clothing principally—a great variety however—some blank-

ets, buckets and a good many articles—I do not know that I could name them all.

Q. Did they at that time use your process at Naugatuck?

A. They did.

Q. Were you there working for Goodyear, making experiments?

A. I was.

Q. Were you employed by the company or Goodyear?

A. By Goodyear.

Q. Are there at the present time any dissolved or camphene goods in the market?

A. I have seen clothing that appeared to be made with camphene.

Q. Any other kind of goods?

A. Carriage cloths, I should think.

Q. Do you know when they were manufactured?

A. I do not, of my own knowledge.

Q. Do you know any places now where they manufacture camphene goods in this country?

A. Only by report.

Q. If the gentlemen on the other side wish, you can state that.

A. I have heard that there was a factory in Connecticut—

Mr. BRADY. We don't want that.

Q. If you take gum, without any compound whatever, and spread it upon the outside of cloth by your process, will it stand the atmosphere?

A. It will stand well under all circumstances, except exposing it directly to the sun.

Q. Will any India rubber goods that you ever saw stand direct exposure to the sun?

A. It will not; the native gum will not; if exposed in thin sheets to the sun it will decompose immediately.

Q. Will vulcanized gum stand the direct rays of the sun?

A. It will not stand so well as lampblack for carriage cloths.

Q. Will lampblack carriage cloths stand the best?

A. They will stand better than vulcanized cloths, so far as my experiments go, and I have experimented a good deal.

Q. Do you mean both the lampblack carriage cloths and the vulcanized carriage cloths prepared by your process?

A. I mean either way; lampblack would stand better than vulcanized; though those prepared with camphene and lampblack do not stand, perhaps, better than vulcanized; but those prepared with lampblack by my process stand decidedly better than any other.

Q. What is the effect of lampblack upon the goods?

A. I do not know what other, except that it operates as an antiseptic, to absorb and prevent spontaneous decomposition.

Q. Did you ever see a machine constructed after that specification (Hayward & Bickford's machine)?

A. I have seen machines which operate like that.

Q. Have you seen one intended to be constructed like that at Dr. Harts-horn's?

A. Not as described here.

Q. Is there any substantial difference between your process and that described in that specification; and, if so, what is it?

A. I do not see any substantial difference at all. They both spread the gum by rollers and friction, and substantially in the same way; and both grind it into the cloth in the same way.

Q. Can you, with your process and machinery, produce the same result which is there described in that specification?

A. I can.

Q. State whether, in the use of your machinery, you do produce, as described in your specification, the same result.

A. I produce the same results precisely.

Q. State whether, in the invention and discovery that you made, or claim to have made, you derived any knowledge or assistance from any body.

A. I did not.

Q. It is stated that your original monster machine had but three rollers, while your specification described four that may be used; how is that?

A. I originally drew my draft with four rolls, and ordered four. The frame was made high enough to take in four; but there was so much delay in getting the machinery completed, that, having got three of them done, I concluded to put them into operation, and not wait for the fourth one.

Q. It was a mere matter of convenience under the circumstances?

A. A mere matter of convenience.

Q. Suppose you take the crude gum and put it into the grinding machine, and put it through the regular grinding process, such as is described by your specification, is it then in a fit state to go directly on to the rollers for rolling it on to cloth or into a sheet?

A. It is not in so good a state as I expected it would be by the addition of the fourth roller to the spreading machine. The fourth roll, as I expected, would bring the India rubber in contact with the cloth in a very evenly heated state—better warmed up.

Q. Is the putting of it into another warming machine, as it is called, a substitute for that?

A. It is.

Q. Then if you run it through the original grinder, and then put it into the warming rollers, and spread it upon the cloth with the three or the four rollers, is that your process?

A. That is my process; that was my process,—to take it from the grinding rolls, and put it into the three roll spreader.

Q. Is that process described in your specification?

A. That is one process of using it, as described in my specification.

Q. The other way is only separating it and using it in different machines?

A. That is all.

Q. What is that? (handing him a piece of India rubber cloth.)

A. This appears to be coated with India rubber; it has either been exceedingly ground or heated before spreading or after.

Q. Is that clear rubber?

A. That is clear rubber.

Q. It seems to be decayed; state whether it is so or not?

A. It does not appear to be decayed; it appears more like rubber that has been exceedingly heated in some way; it is decay in one sense,—rapid decay.

Q. Properly ground, would such an appearance as that be indicated by exposure to the air?

A. It would not.

Q. Were you present when M. Durant testified?

A. I was.

Q. Did you see a specimen exhibited here of rubber ground on to, or into the cloth?

A. I did.

Q. Were you present at the making of those specimens?

A. I was.

Q. Are those made according to the description in that specification, you have before you? (Hayward & Bickford's.)

A. They are.

Q. Exactly?

A. Exactly the same as described.

Q. Made by your machinery?

A. Yes, sir.

Q. Is the process of making them described in your specification?

A. It is.

Q. Does the vulcanization of the original rubber itself, without any compound, make it any more effective to resist the rays of the sun?

A. It does not; it makes it less so.

Q. Then the heating or vulcanization makes it less effective, without the compound, to resist than it was in the original state of pure gum?

A. It does so.

Q. Are any goods now made by the pure gum, such as life preservers?

A. I cannot state as to that; they always were made of pure gum while I was at Roxbury and run this machine.

Q. Which would be the best as to quality,—those made of pure gum or those made with the compound?

A. They would be the best made of pure gum.

Q. How is it with air bags? which would be the best?

A. Pure gum would hold the air better.

Q. Pontoons?

A. They hold the air better.

Q. What are they employed for?

A. In the army, for bridges.

Q. Are they best of pure gum or of compound?

A. Best of pure gum.

Q. Can they be made with camphene?

A. They would not stand well if made with camphene; they would decompose.

Q. How would it be as to vulcanization?

A. Pure gum unvulcanized would be the best.

Q. That would be best for all these air bags?

A. It would.

Q. Is there any other class of goods that are best made of pure gum unvulcanized?

A. All kinds of air work is better.

Q. Why is it better?

A. It will hold air longer; air is more or less liable to escape from the best rubber or any other substance.

Mr. RICHARDSON said he would call Mr. Chaffee again upon the question of the title.

Mr. BRADY then said he would prefer to cross-examine him when the counsel had got through with that examination.

MR. SHAW RECALLED AND EXAMINED BY MR. JENCKES.

Q. Did you make the model before you? (pointing to the model of the Haywood and Bickford machine.

A. I did.

Q. What is it a model of?

A. It is a model of a calender which was used in Hartshorn's establishment for the purpose of spreading cloth.

Q. When was that machine in Hartshorn's factory made?

A. The alteration of the middle and bottom roll was made in 1851, I believe, or early in 1852.

Q. What was it before the alteration?

A. It was a calender for the purpose of spreading sheet-rubber.

Q. How was it altered?

A. It was altered to a draft motion or friction motion—one roll running slower than the other.

Q. Did it run with even motion before?

A. It did.

Q. Is that machine running still?

A. I do not know.

Q. When did you last see it in motion?

A. In June, 1853.

Q. Have you been there since?

A. I have not.

Q. At whose request did you make the alteration?

A. Dr. Hartshorn's.

Q. Did you make any other machines there before or after the alteration of this?

A. I altered this machine at the time I built that one (pointing to a five roller model).

Q. Did you make any grinders at that time?

A. Yes, sir.

Q. Did you have any conversation with Hartshorn about grinders at that time or subsequently?

A. Yes, sir, every day.

Q. Any reference to the Chaffee patent made in those conversations?

A. I do not recollect that there was.

Q. Was there at any time?

A. Not by him, I believe.

Q. By any one in his presence?

A. I do not recollect that there was.

Q. Did you make the other model here? (referring to the Atkinson model).

A. I built that.

Q. What did you make that from?

A. From the specification.

Q. What specification?

A. The Atkinson machine, so called at Lowell.

Q. Is that a correct model from the specification?—in what does it differ?

A. I do not know that it differs any where, except there is no steam applied to it.

Q. How is the distance from the steam cylinder to the other rollers, compared with the description?

A. On the scale that I built it, it comes very near.

Q. Look at the model beside you, (referring to another model of the same,) is that correct?

A. That is another machine altogether.

Q. Were the rollers of the friction calender in the friction machine, which you built or altered, placed in the same position in relation to each other that they are in the model?

A. Yes, sir.

Q. Were they upright or horizontal?

A. Upright, erected the same as these.

Cross-examined by Mr. Bradley.

Q. Do you understand this Atkinson specification as describing a machine which may be used for two purposes—one for spreading and the other for drying rubber cloth?

A. Yes, sir, it can be used for two processes both at once.

Q. When it is used for drying, you are directed to make that cylinder large?

A. That large.

Q. When you use it for drying, you are directed to have that cylinder how large?

A. Three times as large as this (pointing to another).

Q. Suppose you use it only for spreading, have you any object for the cylinder except for carrying this endless apron?

A. All you want is, something to keep this apron tight.

Q. In regard to this other machine, did it revolve with an equal motion before you altered it?

A. It did.

Q. Did you make the revolution indicated in this model the same as the original machine?

A. I think it is.

Q. Are you certain?

A. That is within half an inch of the revolution.

Q. Did you understand what the purpose of making this change was?

A. The purpose was to grind the rubber through the coating cloths—to force it through—to force its grinding.

Q. Does that machine put all the rubber on the cylinder on to the cloth, or only a portion?

A. A very small portion.

Q. Did it before you altered it, put the whole of the rubber on to the cloth?

A. It did.

Q. Do you know whether the machine before it was altered would spread a thin coat of rubber upon both sides of the cloth, such as you use for linings of shoes?

A. It would spread it thin, in the common way of speaking.

Q. But thin enough for the linings of shoes?

A. Well, it did.

Q. Do you recollect the difference in the working of this machine before it was altered, and after it was altered?

A. I do.

Q. What was the difference?

A. In relation to the goods taken from the machine, did it merely cover each side of the cloth apparently alike?

Q. Did it put on a thinner coat of rubber than it used to before you altered it?

A. It did.

Q. Do you recollect around which of these cylinders the cloth went—the slow or the fast?

A. The cloth was wound up in a separate machine from this, I think. It was entered between the lower and middle roller.

Q. Which goes around the fastest?

A. The middle one.

Q. The rubber roller goes the fastest, and the cloth the slowest. Whose machine was this? what was it named from?

A. I do not know any thing about it; so many claimed it I could not tell any thing about it.

Q. Do you know whether Hartshorn uses a machine like this in making his sheets of rubber—an apron like that running off from two rollers like that (pointing to a model of another machine)?

A. That has nothing to do with this machine.

Direct resumed by Mr. Jenckes.

Q. What is that machine called to which you just referred?

A. It is for the purpose of making sheets of rubber, rolling them out thin enough to make the upper part of shoes.

Q. Is that any such machine as is described in the specification handed to you from which you made your model? (referring to one of the models of Mr. Atkinson).

A. I do not understand it is; that has two rollers running even motion; as far as those two rollers are concerned it is—no further.

Q. That is another thing which you made. Have you read over this specification of Atkinson's?

A. Yes, sir.

Q. Did you find here a description of any machine that does not contain a large drying cylinder, or of a heater to be used in place of it?

A. I did not.

Mr. RICHARDSON offered to put in a certified copy of the report of the commissioner of patents on the application for the extension of the Chaffee patent.

(Objected to as not evidence, and ruled out by the Court.)

MR. DURANT RECALLED AND EXAMINED BY MR.
RICHARDSON.

Q. I understand you wish to explain some part of your testimony?

A. I wish to explain that by fixed oil,—a term applied to what is termed dead oil by Dr. Ure, or to the bitumen contained in it—I mean fixed at the temperature at and below which the distilled matters, such as naphtha, ammonia, leave it. The termed fixed or volatile oil is rather indefinite in chemistry.

Q. (By Mr. BRADLEY.) The oil that is left after the naphtha is carried off, you say, is dead oil?

A. That is so described by Dr. Ure; I do not say that it is; I think the term a bad one—or oil in any way; I should prefer to call it bitumen.

Q. (By Mr. BRADLEY.) You think he applies the term fixed oil?

A. No, I think he applies the term dead oil, under the head, I think, of tar.

Q. (By the COURT.) By fixed oil what do you mean?

A. I mean fixed oil as applied to the article dead oil, described by Dr. Ure; I mean fixed, not volatile, at and below the temperature at which it is left as dead oil—when the naphtha has been distilled. It is not termed dead oil till it has been distilled—the most volatile matters distilled off.

Q. (By Mr. BRADLEY.) What is left after the naphtha is dead oil?

A. Dr. Ure calls it dead oil; I was asked whether it was fixed.

Q. (By Mr. BRADLEY.) Do you call it fixed oil or not?

A. I call it fixed in the sense in which chemistry understands volatile oil.

Q. (By Mr. BRADLEY.) Is it a fixed oil or not?

A. It is not an oil at all according to my understanding. Dr. Ure calls it dead oil.

ANDREW HORN, SWORN AND EXAMINED BY MR.
RICHARDSON.

- Q. Where do you reside?
A. In Roxbury.
Q. What is your business now?
A. I am in the lumber business.
Q. Were you ever in the India rubber business?
A. Yes, sir.
Q. When did you commence?
A. In 1833, I think.
Q. How long did you continue?
A. I was there about three years and a quarter.
Q. What did you do there?
A. My first business was to assist in spreading the rubber solution on cloth.
Q. Whom did you assist?
A. There were different men.
Q. Who had the direction of it?
A. Mr. Chaffee was the principal man that I knew.
Q. From that time forward who had the charge of the dissolving department?
A. Mr. Chaffee was the principal, and I suppose I came next to him. He took me in that department soon after I went there.
Q. In 1834, how much solvent did you use to a pound of rubber?
A. We used about twenty-five gallons of turpentine to twenty pounds of rubber.
Q. How much solvent did you use in a day?
A. From five to ten barrels.
Q. You left there when?
A. In 1836.
Q. Did you at any time while there hear about a new method of dissolving rubber and putting it upon cloth?
A. I do not know as I heard of any new way of dissolving; they had a new way of applying it to cloth.
Q. Without the use of solvents?
A. Yes, sir.
Q. Do you remember when you first heard of that?
A. In 1835—the fore part of the year I should think.
Q. When did you quit there?
A. In September, 1836.
Q. What was the reason of your quitting?
A. This “monster” hove us out of work, I believe.

Cross-examined by Mr. Bradley.

- Q. When did you say the monster threw you out of work?
A. I quit there in 1836; it had been in operation some time before I quit.
Q. What time in the year did you quit?
A. In September.
Q. How long prior to that had you had the monster in operation?
A. I guess it had been in operation some eight or nine months.
Q. Have you any thing more than a guess?
A. I think it went into operation about January.

MICHAEL McLAUGHLIN, SWORN AND EXAMINED BY MR. JENCKES.

- Q. Have you ever worked at India rubber?
 A. Yes, sir, some time.
 Q. When did you begin?
 A. In 1836.
 Q. Where?
 A. In New Brunswick.
 Q. For whom?
 A. Mr. Onderdonk.
 Q. What time in 1836?
 A. Along in the fall.
 Q. How did you prepare your rubber there?
 A. With spirit and lampblack.
 Q. How much spirit did you use when you first commenced?
 A. I should think about thirty gallons to a hundred weight.
 Q. Have you any means of stating it exactly?
 A. There was no rule; there were other times we wanted a good deal more; for some purposes more had to be used.
 Q. How long did you work there?
 A. Among the parties about ten or twelve years.
 Q. Did you continue to use solvents?
 A. During my time they did pretty much, not all the time.
 Q. When did they stop using it?
 A. I think along in 1846.
 Q. What did they use then?
 A. Pure rubber.
 Q. How did they use it?
 A. Ground it with spirit.
 Q. How did they grind it?
 A. By heat.
 Q. What kind of machinery?
 A. They called it the monster machine, set up by Mr. Chaffee's direction, I think.
 Q. When you dissolved the rubber in turpentine, will you state whether it was or was not all covered with the spirit?
 A. It ought to be all covered; we put a weight on it to keep it down in the barrel.
 Q. Did you work for any body before you worked for Onderdonk?
 A. No, sir; he was the first man—and Mr. Hutchinson; Mr. Onderdonk was the first who employed me.
 Q. How long had they been at work before you commenced with them?
 A. They hadn't started business completely at the time I went there—for some time; I think in 1835, along.
 Q. What kind of power did you have when you first began?
 A. A small engine.
 Q. Worked by horse-power?
 A. I believe they had, before I went.

Cross-examined by Mr. Bradley.

- Q. What did you put your rubber and spirits into?
 A. Sometimes into cans, and other times barrels; what was most convenient.
 Q. Did you put 30 gallons to a hundred weight in a barrel?
 A. Yes, sir; if not, we divided it.
 Q. How many pounds of rubber to a barrel? Can you get thirty gallons of spirit in a barrel? You say if you cannot you divide it?

- A. Yes, sir.
- Q. Do you recollect how far the spirits dissolved or softened the rubber? whether or not it softened the outside and left the core inside hard?
- A. That is owing to how it is put together.
- Q. How is the fact?
- A. You must prepare your rubber by having it pretty well heated before you put it into the barrel, by a stove, or in some way.
- Q. You had to heat your rubber before you put it into the barrel?
- A. You may do it if you have a mind to.
- Q. I ask you for the fact?
- A. The proper way is that way.
- Q. Is that the way you did?
- A. Sometimes we did and sometimes not.
- Q. Suppose you didn't heat it, would not the spirits leave a hard core in the rubber?
- A. If you would let the spirits long enough on it, it would not. To make a speedy job of it to use to-morrow you wanted to heat it.
- Q. How long would it take if you didn't heat the rubber for the spirits to work through the rubber and soften the whole of it?
- A. It would take a considerable time; I could not tell you exactly how long.
- Q. Didn't you try the experiment?
- A. Yes, sir, I think I did in twelve years.
- Q. Can't you tell what was the result of it?
- A. It made it quite hard, and you could not get lampblack in it so well.
- Q. What made it quite hard?
- A. It was cold and could not get in, not of a sudden; but let it in warm, or of a summer, and it would do very well.
- Q. How long would it take for the turpentine to get into the rubber?
- A. It is owing to how you prepare it.
- Q. Suppose you didn't prepare it at all, but put it in raw, how long would it take?
- A. I could not tell exactly.
- Q. Are you sure it would do it at all?
- A. I should think so.
- Q. Did you ever take it out of the barrel where you had the spirits and put it into the machinery, and find it all dissolved all the way through?
- A. I did.
- Q. How long did it take?
- A. As I remarked, it is pretty much owing to the preparing of it before going in; you must have it all properly prepared to get the spirits united through.
- Q. The question is, when it goes in whole, not prepared at all?
- A. It lies sometimes before it gets through, and would be pretty hard, no mistake about that.
- Q. What was your part of the business?
- A. I did a little of any thing around the place at first when I commenced.
- Q. What did you do first?
- A. First I attended to the engineer, to do any thing. I was hired for that purpose.
- Q. How long was you with Onderdonk & Hutchison?
- A. Something about four years.
- Q. Did they use rollers?
- A. Yes, sir.
- Q. Did they put the rubber in between the rollers?
- A. Yes, sir.
- Q. Do you recollect whether they were heated? whether they had steam in them?
- A. They had after some time.
- Q. Did they have steam in the rollers before Chaffee came there?

- A. Not in the grinders.
- Q. Did they in the spreaders?
- A. They had; some pipes came from their boilers, and occasionally when the gum would be in we would go and let it up.
- Q. That was before Chaffee came?
- A. Yes, on the spreader.
- Q. How long was Chaffee at work for them?
- A. I could not exactly tell; I guess about two years.
- Q. When did he come?
- A. I think he came along in 1846.
- Q. How long did he stay?
- A. I didn't keep any account of it; he was behind me a good while.
- Q. I want to know if you recollect of the grinding rollers getting hot?
- A. They did sometimes.
- Q. Didn't you have to put them into the canal to cool them?
- A. I don't recollect.
- Q. Don't you recollect putting them into water to cool them?
- A. No, sir.
- Q. Do you recollect of their getting so hot that they had to stop them?
- A. I recollect we had to stop, and I know we cannot grind if the rollers get too hot.
- Q. When you had no steam in the rollers didn't they get so hot that you had to stop them running?
- A. I had to carry hot water often to heat them. I did like to be burnt to death by carrying hot water.
- Q. You carried hot water?
- A. Yes, sir, and I can prove it.
- Q. Didn't they get hot by grinding the rubber without water?
- A. You had to get more power on them. Any thing run too fast will get hot.
- Q. What did they do when they got hot?
- A. Threw the belt off.
- Q. That stopped the machinery?
- A. There was another way, and that was to take rubber.
- Q. Didn't that stop the machinery?
- A. Yes, sir; or you could take another heap of rubber and cool them off in that way.
- Q. So when your grinders got too hot you would throw off the belt and take a new mass of cold rubber?
- A. Yes, sir; I used them in that way.
- Q. Were you there when Chaffee came?
- A. Yes, sir.
- Q. What year was that?
- A. 1846, I think.
- Q. For whom was Chaffee working?
- A. I suppose he came to work for Onderdonk & Letson.
- Q. Under whose direction did you work?
- A. Under Mr. Onderdonk, I think, or Letson.
- Q. Who directed you in the work you had to do? who was the foreman?
- A. I suppose Mr. Onderdonk; I didn't give myself much trouble; I could do the work.
- Q. Who was the foreman?
- A. Mr. Millard.

Direct resumed by Mr. Jenckes.

- Q. What did you do after you had been there some time? You say at first you worked around the place?
- A. At first I worked around the place; then they got me to grind the rubber, and kept me at it continually; made a business of it.

- Q. How long did you say you worked at this business in this factory?
A. I wrought along from 1836. I quit, I guess, in 1844. I wrought very near steady for the parties, practised the whole time.
Q. When did you heat the rollers with hot water?
A. It was in Millard's time, when he followed the business.
Q. How large were the grinders?
A. They were small grinders; ten inches, I think, in diameter.
Q. Have a hopper at the top?
A. Some of them had for the purpose of putting in lampblack.

Adjourned.

EIGHTEENTH DAY.

PROVIDENCE, *Wednesday, Feb. 14, 1855.*

TESTIMONY OF FARLEY, DURANT, STODDARD, EDDY, DEXTER, BROWER, WALDRON, AND CHAFFEE.

ALFRED M. FARLEY SWORN AND EXAMINED BY MR. RICHARDSON.

- Q. Where do you reside?
 A. In Montreal.
- Q. What is your business?
 A. I am engaged in the manufacture of India rubber shoes.
- Q. Do you make the heated shoes?
 A. Yes, sir; I am agent of a company there, and it is my own business so far as that matter is concerned.
- Q. How long have you been engaged in the rubber business?
 A. I should say about five years—between four and five.
- Q. Do you use coal-tar in the manufactory where you are?
 A. We do.
- Q. Do you use solvents?
 A. No, sir; I should not say we used any solvents.
- Q. How much coal-tar do you use?
 A. I do not know exactly the proportion we use; we are not very particular about it. We use about a teacupful in about twelve pounds of composition. We use it, perhaps, differently from some others; we put it into the dry composition—about a teacupful of coal-tar.
- Q. Do you boil it before you put it in?
 A. No, sir.
- Q. Do you put it into the dry mixture?
 A. Yes, sir.
- Q. And then put the whole into the rubber?
 A. Yes, sir; the dry mixture absorbs the coal-tar. It is stirred up together and put in.
- Q. Do you know the object for which you use it?
 A. It is beyond my power to state what is exactly the object. I suppose the whole thing is a chemical composition, and we suppose it counteracts somewhat the appearance of the sulphur on the shoes. It has always been used in the regular form of a receipt. I have made shoes without it and seen no particular difference; still, it is customary to use it. It is one of that kind of things we cannot tell exactly whether it does good or hurt. We have found it to work well. What the exact chemical operation of the matter is, I am unable to say.
- Q. Have you ever made goods with solvents?
 A. No, sir; we have never made camphene goods.
- Q. Have you ever in any establishment you were ever in?
 A. No, sir; we have always made vulcanized goods, and never dissolved or softened the gum by solvents in any quantity. We make some little cement sometimes, to be used in some parts of the work with camphene—as a mere cement; but we have never used camphene for dissolving or softening our rubber at all for shoes; we use no camphene about our shoes.

Cross-examined by Mr. Bradley.

Q. What is your relation to your manufactory?

A. I am manager and secretary of the company. We style our agents a little different there from here.

Q. Whom are you with?

A. The Montreal Rubber Company—a joint stock company.

Q. Is that connected with Bourn & Brown in this city?

A. There is no manner of connection with them beyond the fact that Bourn & Brown, and Chaffee & Co. are stockholders to a certain extent with the company; they have some share of the stock.

Q. You are agent now; what falls within your sphere or province?

A. I am secretary and manager, and the whole business of the company falls within my sphere.

Q. Your main business is buying and selling?

A. Buying and selling, and superintending and managing.

Mr. RICHARDSON (to Mr. Bradley). You said yesterday you wanted Mr. Durant to prove something by the Chaffee process; what was it you wished him to do?

Mr. BRADLEY. I cannot say; I think there were two or three things I wished him to do: one was, I think, to take a piece of cloth and put a thin coat of rubber on both sides of that piece of cloth—such a thin coat as will answer for the linings of shoes—by the Chaffee machine.

Mr. RICHARDSON. That is the only thing I recollect; was there any thing more?

The COURT. I guess that is all; I had an impression there were two things.

MR. DURANT RE-CALLED AND EXAMINED BY MR.
RICHARDSON.

Q. Will you produce that sample given you yesterday? (Witness produces it.)

Q. Is this the sample?

A. That is the one.

Mr. RICHARDSON. That is what they wished this witness to make one like.

Mr. BRADLEY. We wanted a large, whole piece of cloth.

Mr. RICHARDSON. We did not so understand it.

Q. Have you made any?

A. I have.

The COURT. You asked the gentlemen to furnish——

Mr. RICHARDSON. I guess we have got some samples; if not we will give the gentlemen a hundred yards.

Q. Did you make that (referring to the sample produced) with the Chaffee machine?

A. I did.

Q. Have you any more specimens that you made of it?

A. I have; there (producing a specimen) is a specimen made on that machine with some rubber got from Dr. Hartshorn's factory.

Q. That is the same cloth and the same rubber?

A. No, the cloth is different.

Mr. BRADLEY. I wanted Mr. Durant to do this in the presence of somebody else—some witness.

Mr. RICHARDSON. We have had him try some experiments in presence of our witnesses, and these are the results he has produced. We will produce the witnesses.

WITNESS. I would remark, in relation to the one done with the Hartshorn gum—that it was done with rubber in contact with the roller, as described by Mr. Bradley who handed me the specimen; that is rubber in contact with the fast roller.

Q. Have you any more specimens?

A. I have; (showing a specimen) the same thing done with what is termed even motion.

Q. Not the Hartshorn gum?

A. Not the Hartshorn gum, but it is identical; it is coating done in precisely the same way, the only difference being that this is done with an even motion.

Q. Was that done on the Chaffee machine?

A. All was done on the Chaffee machine.

Q. Who was present when it was done?

A. Mr. Chaffee, Mr. Stoddard, and three or four workmen whose names I do not know.

Q. Was that done according to the process described?

A. Precisely—exactly.

Q. Now, sir, I want to know if you went to Hartshorn's factory, and how it happened that you did this alone?

A. I went in company of two gentlemen.

Q. What two gentlemen?

A. I think one was Mr. Onderdonk; I do not recollect the name of the other.

Q. Mr. Millard?

A. I think not.

Q. Mr. Parmelee?

A. Mr. Parmelee and Onderdonk. After we got into the factory I found it difficult to understand—no two seemed to agree—as to what we came there for, and what was required to be done. However, I understood so much from

the gentlemen—that they wanted me to put a thin coat of gum on both sides of the cloth by a particular machine standing there, which they called the Chaffee machine, having no friction. I requested permission, in order that we should come to a full understanding, that I should be permitted to do it on all the machines, or at least on two machines, one of which they stated they had done theirs upon, having an uneven motion. That machine they stated was cold and not then in use. I requested it to be warmed up, which they declined to do. There was then but one machine left on which they were willing I should do this. I directed the workman to get the gum ready and pass it through. I found it passed through too thick. I then directed him to screw it down closer. He said he could not. Indeed he made an effort, and said he had got it as close as he could, and could get it no closer. I then directed him to pass it through precisely as he had this specimen, which I showed him, on the other machine. He stated that he could not—the other machine was different. I could not understand from him how it was different; I could see no difference myself, except one had a friction and the other an even motion. He however, with his best efforts, I suppose, finally passed the cloth through, as he stated, in the same way, or as nearly as he could do it, as was done on the other machine; and the result was this specimen (exhibiting it), which was not at all satisfactory. It is coated, it is true, on both sides of the cloth, but it is much thicker than the other specimen. Not being satisfied, being clearly of opinion that that was not a similar specimen to the one shown, I requested him to heat the rollers hotter. He said he could not do it—that he had no control of that department or had no authority. I then requested him to run them with a slower motion. I think he and one or two other foremen stated that he had no authority to do that—that that was their ordinary run, and I must use the machinery as it ran ordinarily. I remarked that I understood Dr. Hartshorn was willing that I should have command of the machinery, to run it as would suit me. To that I think was stated that probably if I would call to-morrow—and not till then, as Dr. Hartshorn was not in—I might probably have the heat or speed adjusted to my satisfaction. With that understanding I left. It was then somewhat late in the evening—about tea time. With the understanding that to-morrow, some time, those gentlemen would propose an hour when we could go and have the machinery adjusted as I wanted it, we left. Thinking I might be occupied in the morning, and not willing to allow the time to pass, I went down to Chaffee's factory, and spent some time there, and there I took a piece of the gum from Hartshorn's factory, and made these specimens, which you see, on the Chaffee machinery.

Q. Did you make these both with and without the friction rollers?

A. Both with and without; they are so marked; the one marked "rubber fast," means in connection with the fast roller, the one marked "even motion," means both rollers of equal speed.

Q. You have one marked "Rubber, slow?"

A. It must mean in connection with the slow roller.

Q. Is that a specimen you made on the Chaffee machine? (another specimen.)

A. That is another specimen, a little stouter, such as is used by Chaffee in his ordinary business; there is a whole piece of that in his factory now; I would remark, in relation to small or large pieces, that it is a nice operation to adjust the rollers as regards heat and speed, so as to produce a very thin sheet,—a very delicate operation, and requires a very careful workman. In getting it started first, it would require him some minutes, perhaps half an hour or more, to get it properly adjusted, and in his efforts to get it properly adjusted he may spoil a yard or two—in getting the exact pressure, exact heat, and exact speed,—but, after he has once got it adjusted, it is much easier; in other words, a man may make much better goods to run a thousand yards than one, and with greater facility.

Cross-examined by Mr. Bradley.

Q. You produced, when you first came upon the stand, certain samples of

rubber cloth, which you said were spread on what you call the Chaffee machine, with even motion and uneven motion,—various things which are here?

A. That is true.

Q. Then I asked you yesterday, in the presence of some witnesses whom we could know and have confidence in, if you would do a certain thing upon a sheet of cloth, or in presence of the jury; I will ask you if at noon you were applied to, by Messrs. Parmelee & Onderdonk, to go down to these same machines in Chaffee's factory, which you said this thing was produced upon, and do this thing?

A. They made application to me, at what hour I do not know.

Q. About what time was it?

A. Perhaps it was a half an hour before we went to the factory; I do not know the hour.

Q. They applied to you to go down to the same machines, and do that thing for them?

A. They applied to me to try this experiment, and I think they urged that we should go to Chaffee's factory.

Mr. RICHARDSON. The witness has nothing to say about that. We have declined to let either of these two gentlemen go into Chaffee's factory. If you will select any man in Providence who is known to be a man of standing and intelligence, he may go and see this experiment performed; but either of these two gentlemen we cannot permit to go in.

Mr. BRADLEY. We admitted Woodman & Stoddard into ours.

Mr. RICHARDSON. Bourn & Brown's factory is not ours.

Q. You declined that proposition?

A. I did not decline it.

Q. You didn't go?

A. I did go.

Q. To Chaffee's factory?

A. To Chaffee's and Hartshorn's, both.

Q. Did you go upon their application, or decline?

A. Upon their application to go and try this experiment I did go to Hartshorn's factory.

Q. Why didn't you go to Chaffee's?

A. I stated to those gentlemen that I preferred to go to Hartshorn's, because there seemed to be a fastidiousness about getting this coat of rubber equally thin. I wanted the precise identical cloth, that there might be no dispute about it; and, lest there might be a fastidiousness in relation to what was or was not the Chaffee machine, I wanted the identical machines, or any machines which they might have in their factory—I did not care what.

Q. When you went to Hartshorn's factory, did they offer you a piece of cloth to work with?

A. They did.

Q. Did they offer you their machines?

A. No, sir; they offered me a machine, not machines; they declined my special request, to allow me to use a machine with unequal motion, such as they had made their cloth on.

Q. Was that the Hayward machine?

A. That was the Chaffee machine.

Mr. BRADLEY. This witness has affirmed that the Hayward machine is the Chaffee machine. There is a question about that.

Q. Where was the machine located?

A. I do not know north from south; but, as I understand, it is the one standing at the south.

(The witness here went on to describe the machine called the Hayward & Bickford machine, and also the Chaffee machine, and to repeat the history of the transaction at Dr. Hartshorn's factory, when he was interrupted by the Court.)

The Court. You are called to state an experiment, and not to lecture upon a machine; besides, you have been all over that some time ago.

Mr. BRADLEY. The gentleman still persists that these machines are precisely alike. Our proposition is shortly this to this witness: to take cloth which we will furnish him, and rubber which we will furnish him, or cloth that they will furnish him and rubber that they will furnish him, and take the Chaffee machine with equal motion, or the Chaffee machine with unequal motion, where the rubber goes round the fast roller, and the cloth round the slow roller (and I will submit that that is the only mode specified by Chaffee), and with that machine, operating in either of those ways, to do what this Hayward machine does, and I want it to be done in the presence of some person who will understand it.

Mr. RICHARDSON (to witness). That is precisely what you say you have done?

Witness. I did that precisely.

[The reporter would state, inasmuch as there has been some dispute about what Mr. Bradley's proposition was, that whatever he may have intended by it, the exact words, as given above, were noted down as they fell from the lips of the counsel.]

Mr. RICHARDSON. Here is Mr. Pitman; we have no objection to his going into the factory, and Mr. Durant will go into Chaffee's factory, and he will state under oath—

Mr. BRADLEY. I object to Mr. Pitman, he being counsel. We are willing to take the jury or any of their own body after court.

Mr. RICHARDSON. We are willing that the clerk of the court should go—anybody not connected with this business may go. Bourn and Brown's factory is not our factory. The counsel have named certain gentlemen whom Bourn and Brown are particularly willing to let in.

Mr. BRADLEY. The gentlemen say they decline to let us go into their factory.

Mr. RICHARDSON. They decline, not we.

Q. Where is the sample you undertook to put through Hartshorn's factory?

A. I directed a workman to put it through.

Q. Did you ask these gentlemen when you went there to show you how they did it precisely?

A. No sir. (Exhibits the samples.)

Q. How large was the whole piece?

A. This is about a fourth part of it, it was a small piece.

Q. That was the result of your experiment there?

A. Not experiment; it was the result of an effort of the workman to follow my direction—but a very imperfect workman. I knew what I wanted but the workman was not able to perform it.

Q. Didn't you have the machine at your liberty, and didn't you say you could do it yourself?

A. When I say I can do it myself, I mean to say I know how to direct the workmen precisely. I am quite an expert in all that, and I could direct them to do it perfectly. Some things, I think, might require half an hour or an hour to adjust.

The Court. You were asked whether you had liberty to do it yourself.

Q. Didn't you say you could do it?

A. Yes, I did say I could do it; but I would like to explain what I mean by what I can do.

Q. Were not the rollers heated to suit you?

A. No, sir; I requested them to be made hotter.

Q. Were they not pressed together as closely as they could be?

A. The workman stated that they were.

Q. Could not you see for yourself whether it was so or not?

A. It is impossible to see except by the result upon the sheet as it passed through.

Q. Didn't you take hold and try the screws yourself?

A. No, sir.

Q. You are clear about these things?

A. Very clear.

Q. Did you see these pieces spread here?

A. I did; I directed the operation.

Q. When?

A. Last evening.

Q. Now will you go and spread a piece of cloth in this style, by this same machine, in the presence of any man who understands the rubber manufacture?

A. I am willing to do any thing that the parties are willing to set me at; I am here at the disposal of the court.

Mr. BRADLEY. We would like to have the gentleman name somebody to go and inspect, who understand the rubber business. Our proposition is to have this done in the presence of some witness.

The COURT. He says he is willing to do so.

Mr. BRADLEY. I ask the gentlemen if they will permit us to go to these same machines—to have any witness whom we can rely upon named,—who shall go there.

The COURT. The owners must say whom they will permit.

WITNESS. May I make one remark in relation to what appears to be understood about my ability, personally, to do things?

The COURT. That is not the question here; it is about the machines.

WITNESS. That I was not discussing, but it was about my willingness to do certain things personally.

The COURT (to the counsel). Have you done with this witness or not?

Mr. RICHARDSON (to Mr. Bradley). Will you name your witness?

Mr. BRADLEY. I will take Mr. Parmelee.

Mr. RICHARDSON. Bourn & Brown would not have Mr. Parmelee go there. Here is Professor Horsford. Mr. Chaffee says they have some secrets in the factory which they do not want to let out, and he says by stopping their machinery for other works, this witness of theirs may go with Mr. Durant into the factory.

Mr. BRADLEY. There is a difficulty about taking a Professor who is not a practical man in this business.

Mr. RICHARDSON. He was suggested to me by Mr. Pitman.

Mr. JENCKES. Take Prof. Horsford and Mr. Durant to Dr. Hartshorn's factory, and then go to the other factory and see it.

Mr. BRADLEY. We will take them; let them go to Dr. Hartshorn's factory and see how it is done, and then go to your factory and see if you can do it.

Mr. RICHARDSON. I do not know that Mr. Durant will do that. You may instruct Prof. Horsford as much as you choose beforehand.

Mr. BRADLEY. I will propose to go with Dr. Hartshorn myself, and you may go with Mr. Durant.

Mr. RICHARDSON. I do not wish to go; I have had India rubber factory enough.

Mr. BRADLEY. Mr. Jenckes—I should be very happy to invite him.

Mr. JENCKES. Excuse me.

Mr. BRADLEY. My wish is to allow a person who is not a rubber manufacturer, to go to their factory.

Q. You are a chemist?

A. I am, in a moderate way.

Q. Have you analyzed coal-tar.

Objected to as having been already gone over, but afterwards withdrawn.

A. I cannot state that I have analyzed it.

Q. Can you tell what this is (handing him a vial of liquid)?

A. I think not; there are very few things that I can tell without examining them.

Q. Don't you know that is coal-tar?

A. I do not.

Q. Suppose it was, and I should tell you that was one of the ingredients of it (another vial.)

A. I should believe it if I thought you serious. I know that coal-tar produces substances similar to that in color.

Q. What is that substance?

A. That looks very much like naphtha.

Q. What is that (another vial)?

A. That looks very much like coal-tar at the second run of the still, after the naphtha is run off, and then another run containing a small amount of naphtha and more bitumen—about as camphene may be compared with spirits of turpentine, and the two compared with coal-tar or crude turpentine as it runs from the tree.

Q. What does that resemble? (another vial.)

A. That resembles another run of the still, not down to what we call bitumen, but somewhere between camphene and bitumen. It resembles that in color; the odor would resemble it more nearly.

Q. Have you any pure rubber here?

A. No, sir.

Q. Is that pure rubber? (handing him a specimen.)

A. I am not able to state.

Q. There is a piece furnished by Mr. Day?

A. I am not able to state; it resembles pure rubber. I would take it for pure rubber if I wanted to purchase the article.

Q. You say that one of these vials contains naphtha?

A. I do not say it is naphtha; I say it resembles it in color.

Q. You say that is the solvent which exists in coal-tar?

A. That is so treated.

Q. That you admit to be a solvent; but these other oils are not solvents, as I understand you?

A. They will not dissolve rubber; they will soften it; there is a portion of naphtha in them.

Q. What do you understand is the meaning of solvent, as distinct from something that softens rubber?

A. By softening, I understand to separate the parts entirely; to bring the rubber into a plastic state suitable for working.

Q. It is to take the hard rubber and make it into a plastic state so that you can work it?

A. At any temperature.

Q. If you soften it enough you may make it plastic so that you can work it?

A. O yes, sir; and further, a solvent of rubber means something that will make it soft enough to work without great pressure. That is a very indefinite point.

Q. If you take either of these oils of coal-tar, and apply it to a piece of pure rubber—just fasten a piece of rubber, for instance, around one of these pieces of glass we have here—tie it up so that the oil will come in contact with the surface of the rubber—what would be the effect?

A. It will soften the inner surface, if there is naphtha enough to do it.

Q. How will it be after the naphtha has passed off?

A. After the first run of the still, it is not all off; the fact that it is still a fluid, proves that there is still a portion of it left.

Q. Is not the dead oil, which Dr. Ure speaks of, a fluid?

A. Yes, sir; he means a fluid by that.

Q. Then is every thing fluid that you get from coal-tar, naphtha?

A. No, sir; we class as naphtha that which is purely hydrogen and carbon; and yet naphtha is distilled from coal-tar; and Dr. Ure, I perceive, has made a statement that where he stopped the still to get naphtha, he got 4.65 of bitumen.

Q. You say naphtha is contained in that fluid, and it is that naphtha which will produce the effect?

A. Not altogether.

The Court. I begin to get a little sensitive about this matter; I should like to know what it has to do with the case.

Mr. BRADLEY said he did not know but it was a waste of time, but he wanted to test, in the presence of the jury, the knowledge of the witness in regard to the analysis of coal-tar.

The COURT. You seem to agree and differ at the same time; it seems to be rather a verbal criticism. And then, suppose you use coal-tar; what then?

Mr. BRADLEY. It is a solvent of rubber.

The COURT. To a certain extent; but suppose it is?

Mr. BRADLEY. If we use a solvent with machinery, we do not use machinery without a solvent.

The COURT. Do you mean to say, if you use a small amount of solvent, you have a right to use their machines?

Mr. BRADLEY. That is a question to be considered in the light of all the testimony. We have proved the fact that we use coal-tar, and they have taken a great deal of time to prove that it is not a solvent.

The COURT. I see now.

Q. These other articles, besides naphtha, that are distilled—will they soften rubber?

A. Yes, sir.

Q. (By Mr. RICHARDSON.) Does putting that fluid upon glass have any peculiar effect?

A. The act of folding it together retains all the naphtha—all the proximate principles of naphtha; the object of folding it together and tying it on to glass, is to keep every particle of matter there, so that the most volatile shall not escape during the action on the rubber.

Q. (By Mr. BRADLEY.) Suppose you take the dead oil and apply it to the rubber; you retain every thing there is?

A. Every thing there is—the most volatile cannot escape; and the volatile oils are the most valuable. It is the first run of the still that the naphtha begins—precisely like running off alcohol; the first run will be very nearly pure alcohol; the next will be alcohol and water, and so to any assigned degree.

MR. STODDARD, RE-CALLED AND EXAMINED BY MR.
RICHARDSON.

- Q. Where do you reside now ?
A. In Woburn.
Q. When did you commence the rubber business ?
A. In 1834.
Q. Where ?
A. At Roxbury.
Q. Did you do any thing at it before 1834 ?
A. I did not.
Q. Were you ever at the South Boston factory ?
A. I have been.
Q. When were you there ?
A. In 1835.
Q. Who was carrying on business there then ?
A. I do not know ; I was only acquainted with the man who made the composition.
Q. Who was he ?
A. Mr. Dexter.
Q. What composition did they use at Roxbury, in 1834 ?
A. A composition of rubber and spirits turpentine and lampblack.
Q. How much turpentine did they use ?
A. Of my own knowledge I could not say.
Q. Did you see it compounded ?
A. I did not.
Q. You were not in there ?
A. I was not allowed in the composition-room.
Q. Did you at that time have a secret recipe for compounding rubber ?
A. I did.
Q. Did you sell it ?
A. I did.
Q. To what establishment ?
A. To Messrs. Stone & Lovell, who afterwards formed the rubber company at Pitt street.
Q. Did you know what Dexter used at South Boston, in 1835 ?
A. By his admission he used the same as at Roxbury.
Q. Did you see his gum ?
A. I did.
Q. In the mode of preparation ?
A. I think it was after it was prepared for use.
Q. Was it dissolved by turpentine ?
A. It was.
Q. How much turpentine will it take to dissolve a pound of rubber as you saw it in 1835 at South Boston ?
A. It would take, as near as I could judge, four quarts to a pound. I think it might be more ; it is possible it might not be.
Q. Were these recipes for dissolving rubber sold for any valuable consideration about that time, to your knowledge ?
Objected to as taking rather a wide range.
Mr. RICHARDSON wished to show the state of the art at that time.
The COURT. We have already gone over that. I understand that every body used solvents up to the time of the Chaffee machine.
Mr. RICHARDSON. So do we, but we expect the gentleman will argue differently.
Mr. BRADLEY. We shall not argue upon any thing that is not proved.
The COURT. The question is whether solvents were used or not before the introduction of the Chaffee machine ?

- Q. How was it about those recipes? do you know of any being sold?
 A. I know of one which I sold myself.
 Q. Do you know of any others?
 A. Not of my own knowledge.
 Q. How did you get into the South Boston factory?
 A. By being acquainted with Mr. Dexter. We formerly worked at the Roxbury factory.
 Q. How did the goods made at the Roxbury factory in 1834 turn out?
 A. Some of them appeared to do very well, and others did not.
 Q. How were they when the Chaffee machine came into use?
 A. They were much better—acknowledged to be much better—more marketable.
 Q. Were you acquainted with the goods?
 A. I was; I frequently saw them.
 Q. When did you first hear of the Chaffee improvement at Roxbury?
 A. I heard of it at the factory, I think, in the summer of 1834. I do not wish to be understood that I heard it was accomplished, but it was spoken of as about to take place.
 Q. (By the Court.) As what they were seeking after?
 A. Yes, sir.
 Q. Did you make any efforts to find out what it was?
 A. I think I did.
 Q. What effort did you make?
 A. I conversed with Mr. Chaffee frequently, and endeavored to ascertain by his language as near as possible what his intentions were. I found out very little, however, by that. I afterwards, in company with a gentleman, went to a foundry where the castings were made.
 Q. Did you see them?
 A. I saw two rollers.
 Q. Was it an India rubber manufacturer that you went with?
 A. It was.
 Q. When was it you went?
 A. It was in July or August, 1835.
 Q. Where was the foundry?
 A. In North Bridgewater.
 Q. What distance was it?
 A. Twenty-eight miles from Boston. Eight miles from where I then lived.
 Q. When did you first see the monster machine?
 A. I never saw it.
 Q. Did you leave the rubber business about that time?
 A. I left it in the winter of 1835 or '36.
 Q. Had you left the business before you went to make this examination?
 A. No, sir. I was in the business largely previous to my leaving it.
 Q. You say you went in July or August to see the machinery?
 A. And in December following I left the business.
 Q. What has been your business since?
 A. It has been principally the patent leather business.
 Q. Were you present at Bourn & Brown's factory last evening when Mr. Durant and Chaffee were making some experiments?
 A. I was.
 Q. Did you see these specimens made there? (exhibiting specimens.)
 A. I did.
 Q. On what machine?
 A. The Chaffee machine.
 Q. With four rollers?
 A. It was.

Cross-examined by Mr. Bradley.

- Q. Just describe how those four rollers operated?
 A. In what particular?

- Q. In any particular.
- A. They operated by steam.
- Q. Just describe the process, how these specimens were made?
- A. They were made by passing through the rollers.
- Q. How were the rollers run?
- A. In various ways; they passed through the different pieces in various ways. In some the rubber was against the slow roller, some against the fast, and some with even motion.
- Q. In the first place what was there with the rubber? How was it prepared?
- A. That I could not say, not having seen it prepared.
- Q. You don't know how it was prepared?
- A. I have a pretty good idea, but I didn't see it.
- Mr. RICHARDSON. A portion of it was some which Mr. Durant says was taken from Hartshorn's factory.
- Q. Did you take it?
- A. Mr. Durant took one piece.
- Q. Is that some rubber from one factory? (referring to a piece of rubber cloth.)
- A. I think it is.
- Q. We want knowledge and not opinion?
- A. I could compare it with other pieces and tell.
- Q. How was it applied on to the machine, to begin with?
- A. By putting the rubber upon the top and passing it through.
- Q. Describe the process as rapidly as you can.
- A. I think this piece was done in the way I described; there are other pieces done differently.
- Q. I didn't understand that description myself; you put your cloth between the rollers, and put your roller on top of the cloth?
- A. In some pieces; I am not positive as this is the piece.
- Q. How was that piece done?
- A. If it was done in that way, it was done by having the rubber entirely around one roller, passing through, and then being drawn off, leaving a part of the rubber upon the cloth.
- Q. How fast did the roller upon which the rubber was, move in comparison with the one below?
- A. About three to two.
- Q. When you put your rubber on the other side of the cloth, how did you do it?
- A. In the same way. What makes me think this is the piece is, because this appears to have been applied to the roller, and a gloss produced by being rolled under another roller.
- Q. You think from the appearance of the cloth, that this was done in that way?
- A. I could not recollect each piece without comparing them; there is only one piece to compare with.
- Q. Here are the other pieces. (Handing them).
- A. This piece (marked even) was done as I have just described. Some of these were done with the rubber against the fast roller, some with the slow, and some with even motion.
- Q. This is rubber fast, and this is even motion? (Referring to different specimens.)
- A. Yes, sir.
- Q. Are these all the samples you produced—these four?
- A. I believe they are.
- Q. Were these spread on small pieces or on sheets of cloth in the ordinary working machine?
- A. Very nearly the size that they now are.

MR. CHAFFEE RE-CALLED AND EXAMINED BY MR.
RICHARDSON.

Q. (Handing him the four samples.) Were you in Court yesterday when Mr. Durant was requested to make some experiments at your factory?

A. I was.

Q. Was this rubber spread there in your presence?

A. It was.

Q. By your machine?

A. By my machine.

Q. Would there be any difficulty in spreading a large amount of it?

A. No, sir.

ALBERT C. EDDY SWORN AND EXAMINED BY MR.
RICHARDSON.

Q. Where do you reside?

A. In the city of Philadelphia.

Q. What is your business?

A. The shoe business.

Q. India rubber shoes?

A. I am at present selling rubber shoes there.

Q. How long have you been connected with the sale of India rubber goods?

A. The first I had to do with them was in 1841 and '2.

Q. Where?

A. In the city of Providence.

Q. Whose shoes?

A. I was then an apprentice to George O. Bourn; he was manufacturing at that time. I was employed at his factory, and a part of the time at the store selling goods.

Q. When did you first commence selling in Philadelphia?

A. The first goods I sold there was in 1844, when I first went there. I was employed in one of the principal shoe houses, and they also sold rubber shoes every season.

Q. What firm was that?

A. Leavitt, Jenkins & Co.

Q. You say it was one of the largest shoe houses in Philadelphia?

A. Yes, sir.

Q. What shoes did you sell in 1844 and '5?

A. We had all the different makers' shoes, pretty much, that there were at that time, of manufactured rubber and pure rubber. From that on to 1846 and '7, and along to the present day we have been selling the same description of shoes.

Q. In 1845 and '6 did you receive shoes of Onderdonk & Letson?

A. About that time we had some.

Q. Fix the time of which you are certain?

A. I think it was in 1846; I am not positive; I recollect of receiving them. It was my place to receive the goods and correct the bills, and see that they were right. About that time I recollect receiving a lot of them.

Q. How did they turn out?

A. When we first opened them they looked very well. That was in August or September, at the commencement of our fall business in that year. We paid a dollar a pair, and sold them at a dollar and fifteen cents or a dollar and a quarter.

Q. How did they turn out?

A. At the end of the season, which was about the first of November, the goods that were left were put by; and about the first of January it was our habit to gather up all the fall goods that were kept over, and put them up in as small a space as possible. At that time I recollect taking an account of what we had of those metallic shoes on hand, and finding almost every pair decomposed, and almost entirely worthless. Some were so badly decomposed that I took two sticks to get them out of the case, rather than my hands, they were so nasty.

Q. Was there or not any solvent in them?

A. That I did not know particularly about, but I know that goods made with solvents will operate in this way.

Q. Were those goods marked "Onderdonk & Letson"?

A. The boxes were so marked extensively.

Q. Where were they manufactured?

A. I do not recollect where their factory was at the time.

Q. Did you have other shoes along in that year turn out the same way?

A. All the metallic shoes, so called, at that time were pretty much the

same, except some few pairs we bought from a manufactory somewhere in Connecticut.

Q. Have shoes since then been better or worse in the trade?

A. Since 1849 and '50 they have been better. The difficulty was in curing. We got more confidence in them after that time, and those that we carried over in 1850 would do to sell another year; they would stand.

Q. Are those (handing him some India rubber shoes) some shoes you brought here?

A. Yes, sir.

Q. Where did you bring them from?

A. From Philadelphia. These are what I call decomposed; they get sticky, and become soft and out of shape. They are what we consider a worthless article.

Mr. RICHARDSON exhibited to the jury the specimens, marked "Newark India Rubber Co."

Q. Do you know when these were made? (handing him other specimens).

A. I do not know; but I judge from the style that they were made some four or five years ago.

Q. These are "Ford & Co.," how were these made, from your knowledge in trade?

A. The styles changed about that time; the first that were made were with smooth bottoms; afterwards they had a rough piece put on to the sole; the next was stamping them.

Q. You mean rough, like that? (referring to the sole of a shoe).

A. No; that is a stamped sole.

Q. You determine the age by the way these bottoms were made—a different style for different years?

A. Yes, sir.

Cross-examined by Mr. Bradley.

Q. When did you say these shoes were made?

A. I could not say positively, but to go by style I think the smooth bottom ones must have been made four, five or six years ago, and the stamped bottoms since.

Q. You call these rough bottoms? (referring to certain specimens).

A. Yes, sir.

Q. Then at a later time they put on these stamps in addition?

A. No, between the two periods there was a piece put on the sole of a rough, irregular shape.

Q. My question is this: There is a smooth bottom to begin with; the next step was a rough bottom; and after that they put on these stamps?

A. The stamps came afterwards;—by stamps I mean impressions on the sole.

Q. When were these stamps put on the sole?

A. I think the style came out about three years ago; it may be less than that time.

Q. Then these shoes have been made within three years?

A. I think they have.

Q. Who did you say made them?

A. The name is on the bottom; I did not notice the maker's name.

Q. "Newark India Rubber Co.;" is it the practice among rubber manufacturers to mark their poor shoes "Second?"

A. I have seen a great many pairs marked "Second."

Q. What do you understand by it?

A. It means they are inferior.

Q. Are not all these marked "Second?"

A. I did not examine them.

Q. It is easy to see—"Second," "second," all of them; do you know whether the shoes have been made by these companies for the last three years by means of rollers?

- A. I do not; I never was in their factories at all.
- Q. You stated that where there was a solvent in shoes they proved bad; for how many years did you receive George O. Bourn's & Brown's shoes?
- A. We had them in Philadelphia, I think, two or three seasons.
- Q. What years are they?
- A. I think they were 1848 and '49.
- Q. How many years did you have them in Providence?
- A. What we had were in his own store. I was not connected with the store and factory more than a year and a half; I then went on to Philadelphia.
- Q. Were those good shoes or not?
- A. They were a different shoe entirely from these.
- Q. Were they good shoes?
- A. We thought them so when we were selling them.
- Q. Didn't you think them bad afterwards?
- A. I don't know what became of them; I have no knowledge.
- Q. Did you esteem them good shoes?
- A. We did at the time.
- Q. Didn't you esteem them bad afterwards?
- A. Yes, sir; they would not stand cold weather; they would have to be held near a stove.
- Q. Were those shoes made with camphene or not?
- A. Those that were made here were made with spirits.
- Q. What did you mean by saying that where spirits were used they would prove bad?
- A. The vulcanized shoes, I mean.
- Q. Like these?
- A. Any metallic shoes.
- Q. Do you know these were made with solvents?
- A. I do not; I judge so only from their decomposing.
- Q. Did you ever see them made?
- A. Yes, sir.
- Q. Have they been using solvents in the vulcanizing process within three years?
- A. Not to my knowledge.
- Q. And yet these were made within the last three years?
- A. I judge them to be made so by the stamp. They might have been made with solvents or without; but by their decomposing I presume, of course, that they were made with solvents, as that has the effect to decompose rubber and make it entirely worthless.
- Q. Then you infer that is the cause of these decomposing?
- A. That is the effect of solvents.
- Q. It is a mere matter of opinion that camphene was used in these?
- A. I judge from the effect; that is the natural effect of solvents.
- Q. That is a mere matter of opinion. How long were these shoes of Onderdonk & Letson bad?
- A. When we received them they were perfect.
- Q. How many successive years did they continue bad?
- A. The lots that we had we got so entirely displeased with that we would not purchase them after the first or second year, and we bought from other parties. There were more shoes in the market than theirs.
- Q. What year was it you purchased from them?
- A. I think it was the fall of 1846 or '47.
- Q. Was that the first or second year?
- A. I think it was the first year.
- Q. Then you bought them either in 1846 and '47 or in 1847 and '48?
- A. I think we did; I am not positive as to dates; they were the first metallic shoes we bought any amount of.
- Q. Are you certain that it was either in the year 1847 or '48 that you purchased shoes from them?

Cross-examined by Mr. Bradley.

Q. Do you know any thing about rollers being got up for grinding rubber by Mr. Golding, a machinist?

A. Yes, sir; that was our first operation.

Q. When was that?

A. That was in 1835; I think in February or March—probably February.

Q. When was Hoyt's machine first got up?

A. I could not tell exactly; it had been commenced, probably, some time before I was aware of it; it was something of his own; I was not let into the secret.

Q. It had probably been commenced some time?

A. Yes, sir; I know it was in operation in a secret room some time before I was admitted to see it.

Q. When was it first in operation in that secret room?

A. Some time in 1836.

Q. When he began to get it up you did not know of your own knowledge?

A. I know only from circumstances; I think it must have been some time in the spring of 1836—a rough crude thing—a model got up to show the principle.

Q. When did he get the model up?

A. He took some iron geared rollers, about six inches in diameter, and two and a half feet long,—some that Golding first used, and that we had laid aside.

Q. He used them as a part of his machine?

A. Yes, sir.

Q. What became of that machine?

A. I presume it was knocked to pieces; it was good for nothing.

Q. Do you know whether it was carried to Troy?

A. Not that machine; the machine for coating cloth was carried to Troy.

Q. This was a mere model?

A. Yes, sir.

Q. Do you recollect how much solvent was used in connection with the machine that was made after the model, for coating cloth?

A. I only know from what was told me.

Q. Do you recollect about those rollers that Golding made—whether they went with a rolling and slipping action?

A. They did.

Q. Were they used for grinding rubber?

A. Yes, sir.

Q. Do you recollect about the mode of cooling the rollers to which Hoyt resorted?

A. No, sir; not of my own personal knowledge.

Mr. RICHARDSON. He has not recollected that he resorted to any mode.

Q. Did you use lampblack in connection with your solvents?

A. Yes, sir.

Q. How large a quantity?

A. We used a small quantity; perhaps we put in a pound to a barrel. We were not very particular about it; it was simply to color the rubber.

Q. You say you don't know the amount of solvent that was used under the Hoyt machine; do you know whether it was diminished when they came to use the rollers?

A. I have no doubt of that fact.

Q. What proportion you do not know of your own knowledge?

A. Only what I was told.

Q. You say the first piece of cloth you coated was in March 1835; by what method was it coated?

A. We ground the rubber and turned it into a box, and the cloth passed under.

Q. How did you grind it?

A. With those rollers—the first piece we put in.

- Q. That was in March 1885; what else did you do with it after grinding?
- A. We then carried it into another room and put it into a box and fixed a piece of cloth so that it would pass under, where it received the proper thickness of rubber by means of a gauge. It was then passed on to a reel where it was allowed to stand till it was dry.
- Q. You used a gauge to determine and control the thickness of the rubber on the cloth?
- A. Yes, sir.
- Q. What was the consistency of the rubber?
- A. I cannot tell you exactly; about the consistency of Wilmington tar—so thick that it would not run off the cloth when it was coated.
- Q. You say you used as little solvent as you could; why couldn't you use less?
- A. We could not press it through the grinder. That was the trouble. Our object was to use as little as possible, because we knew it was all evaporated and lost.
- Q. What was the difficulty about passing it through the grinders?
- A. One method, after we hove up these rollers, was, pressing it through a sieve.
- Q. Why couldn't you grind it through the rollers?
- A. We could not mix it in the barrel. Unless there was spirits enough to make it of a certain softness we could not do any thing with it; we could not take it out of the barrel.
- Q. What I want to get at is, whether it was the small size and weakness of the rollers or what, that prevented you from grinding the rubber?
- A. Our rollers were small and would not bear a great pressure.
- Q. You could not put pressure enough on to the rollers to grind the rubber?
- A. Not unless we had it very soft.

Direct resumed by Mr. Jenckes.

- Q. You say those rollers were thrown aside; when was that?
- A. We used them but a very little time.
- Q. Before you moved to South Boston?
- A. O yes; some time before; we hove them aside in April.
- Q. The reason was because they would not work?
- A. Would not work.
- Q. Then you used the sieve grinders?
- A. Yes, sir.
- Q. Is that the same machine used at the Roxbury factory?
- A. Before we used the sieve grinder we fitted a cylinder with some perpendicular slats attached to it and a rod running through the slats. With thumb screws we could make the apertures wide or narrow as we pleased, which would prevent any rubber coming through; and then with another thumb-screw we could press the slats up against the cylinder so that they would hold the whole of the rubber. By that means the rubber came out between these slats; but it was rather an uncertain operation, and after a while we adopted the sieve.
- Q. Do you know when the machine that went to Troy was built?
- A. In 1886.

Re-cross-examined by Mr. Bradley.

- Q. You stated that Hoyt used the Golling rollers in getting up his model and after that he made a machine which he carried to Troy; do you recollect the difference between the size of the rollers which he made to carry to Troy, and those he used for the model?
- A. I should think, as near as my memory serves me, that they were nearly twice as big.
- Q. Those in the model you said were about six inches in diameter?
- A. I think so; I cannot say exactly.

HALSEY BROWER, SWORN AND EXAMINED BY MR. RICHARDSON.

- Q. Where do you reside?
 A. I reside in Luzerne Co., Pennsylvania.
 Q. Where is your principal place of business?—in New York?
 A. I am there a great deal in consequence of my business.
 Q. You formerly resided in Pennsylvania?
 A. Yes, sir.
 Q. Were you formerly in the rubber business?
 A. I was.
 Q. When did you commence?
 A. I commenced with Mr. Day I think, in Dec. 1844, as clerk in his store at 25 Maiden Lane.
 Q. How long did you continue with him?
 A. I remained with him till March 1846.
 Q. Two years?
 A. A year and three months.
 Q. Where did you go then?
 A. To 100 Broadway, a place kept by George Beecher.
 Q. Had Judson anything to do with that place at that time?
 A. Not that I know of, at that time.
 Q. In what capacity did you go there?
 A. As salesman.
 Q. What time was that?
 A. In 1846, in February or March, I think.
 Q. You sold India rubber goods?
 A. Yes, sir.
 Q. How long did you continue with Beecher in that capacity?
 A. About a month.
 Q. What took place in the store?
 A. Mr. Beecher made an assignment to Mr. Brooks, who was his book-keeper, and myself; and Brooks and myself, under the name of Brower & Brooks, associated with Judson, became the proprietors of the establishment.
 Q. Was Judson a partner?
 A. He was.
 Q. Did his name appear in the concern?
 A. It did not.
 Q. How long did you continue there associated with Judson?
 A. Till the 6th or 8th of January, 1847.
 Q. What took place then?
 A. There was then a dissolution; I retired from the concern as partner.
 Mr. BRADY. What is the object of this?
 Mr. RICHARDSON. To show what this man knows about India rubber.
 Q. What did you do then in connection with India rubber?
 A. I remained there as salesman till, I think, in June or July, when I left; I am not certain about the precise time.
 Q. As near as you can fix it?
 A. It was either June or July, 1847.
 Q. Where did you go then?
 A. Soon after that I went with Wm. Ward—I think in November, 1847.
 Q. What business was his?
 A. India rubber business, carried on at 159 Broadway.
 Q. The sale of goods?
 A. The sale of India rubber goods.
 Q. In what capacity did you go there?
 A. As salesman.
 Q. How long did you stay?

- A. I remained there till the 22d of November, 1849, when I left for California.
- Q. Did you go to California in connection with the India rubber business?
- A. No, sir.
- Q. Did you at any time take India rubber goods on commission?
- A. I did.
- Q. What year?
- A. In November, 1848.
- Q. For whom?
- A. For Mr. Ward.
- Q. Do you know any thing about vulcanized shoes made with camphene or turpentine?
- A. I have seen a great many that were said to be made in that way.
- Q. What years were they in market?
- A. I saw them in 1844 and '5, and down to 1849.
- Q. Have you been acquainted with the India rubber business since 1849?
- A. Not at all.
- Q. Did you see any that were not camphene vulcanized goods before you left the business in 1844?
- A. Yes sir—that were said not to have any camphene in them. I do not know of my own knowledge.
- Mr. BRADY objected to hearsay evidence.
- Q. Were they shoes that you saw in 1844, '5, '6, '7 and '8?
- A. I saw other goods besides shoes.
- Q. Had you any knowledge of their having camphene in them?
- A. I was a purchaser of the camphene which was said to be used.
- Q. At what factory?
- A. At Day's factory.
- Q. At any others?
- A. I was not purchaser of camphene at any other factory. But the shoes manufactured by Onderdonk & Letson, which Mr. Ward sold—being, I think, the exclusive agent for the city of New York—had camphene in them I think. I know they blistered very much, which arose from the fact of there being camphene in the composition.
- Q. Were you in the habit of going very often to this factory?
- A. I was there very often—as often as about once a week.
- Q. Did Mr. Ward obtain a large quantity of shoes from Onderdonk & Letson?
- A. He did.
- Q. You used to be in and about their factory?
- A. I did.
- Q. What were the evidences of camphene being used?
- A. I saw a great deal of camphene there.
- Q. Did you smell it?
- A. Yes, sir.
- Q. In their goods after they were vulcanized?
- A. No, sir; I could before, in the composition.
- Q. How were the vulcanized camphene goods? good?
- A. No, sir; they were not.
- Q. Wherein were they defective?
- A. They were very apt to blister; indeed it was invariably the fact with heated goods, after the use of camphene.
- Q. How was it in regard to decay?
- A. I cannot say; I know that the shoes first made by Onderdonk & Letson, and sold by Mr. Ward, were very defective indeed—a great many of them. Whether it arose from that or some other cause, I am not able to say.
- Q. How were the goods you introduced into Paris?
- A. They were Onderdonk & Letson's; that was at a later period—in 1848.
- Q. How were they?
- A. The shoes that they made in the fall were a great deal better than those they made at any time previous.
- Q. Were those last ones blistered?

A. They were not blistered at all; if they were so they were at the factory; I did not see any of them.

Mr. RICHARDSON then proceeded to examine Mr. Brower upon the other part of the case, in relation to the title, as follows:

Q. What was Judson's business at the time you were in company with him?

A. Professedly a lawyer.

Q. Did he have any capital in that concern of Brower & Brooks?

A. Not any.

Q. (By Mr. BRADY.) What year are you speaking of?

A. I speak of the latter part of February or first part of March, 1846.

Q. Did he have a lawsuit with Brooks?

A. He did, but some time after that.

Q. Growing out of that transaction?

Mr. BRADY. What transaction?

Mr. RICHARDSON. The partnership of Brower & Brooks.

Mr. BRADY objected to going into that.

Mr. RICHARDSON. You have given evidence in regard to Judson's practice as a lawyer.

Mr. BRADY. And you are going to prove that he acted as a lawyer in that case. I object to it.

Mr. RICHARDSON. I don't know whether he did or not.

Mr. BRADY. I know he didn't.

Q. Did he have a lawsuit growing out of that transaction?

A. Yes, sir.

Q. Did he act as counsel in the case at that time?

A. I do not remember of but one case that he acted as counsel, and what that case was I have now forgotten. Mr. Brooks, who was a lawyer at that time, was attorney in the case.

Q. Was it about India rubber?

A. I think not. That is the only case I know of.

Q. Did he assign any reason for not wanting his name to appear in the firm?

A. Yes, sir.

Q. What was it?

A. That he was an attorney and counsellor at law, and therefore had better not have his name known.

Cross-examined by Mr. Brady.

Q. When did you first become acquainted with Judson?

A. I think it was in December, 1844.

Q. Where was his office?

A. At that time, I cannot tell.

Q. Had he an office?

A. I cannot say positively that he had.

Q. Were you ever in his office?

A. I have been in an office which he occupied after that time.

Q. What year?

A. In 1846; he appropriated a portion of his store, at 100 Broadway—the upper back office—to his own use, and I think he had some books there.

Q. That is an India rubber store?

A. Yes, sir.

Q. In whose name was the business carried on?

A. Brower & Brooks.

Q. In 1846 he appropriated a part of the store to be used by him as an office?

A. Yes, sir; as a private office.

Q. Wasn't he attending to the business of that store?

A. He devoted some little time to it; he left, however, the most of it for Brooks and myself.

Q. Did he devote any time to any other business that you know of?

A. Do you mean that he devoted any other portion of his time to legal duties?

Q. To any other business than the business of that concern, in the room which he had partitioned off?

A. There were frequent consultations between him and parties connected with the India rubber business, and he devoted a great deal of his time to them at that time.

Q. Was that all the business he had in that office at that time that you know of?

A. All the business I know of except the case I have alluded to, in which he was counsel.

Q. Had he any sign out at that building as counsel?

A. He had not.

Q. At any time?

A. No, sir; not at any time.

Q. That suit of which you spoke about of his, in which Brooks was attorney, do you know any of the parties?

A. I do not; I only remember that there was a suit, and some portion of the time I was associated with Brooks and Judson, and that Mr. Brooks, a lawyer, residing in New York, was attorney in the case, and Judson was counsel.

Q. How do you know there was such a case at all?

A. By hearing it talked of in the store.

Q. Who talked about it?

A. Mr. Judson.

Q. With whom?

A. With me and Mr. Brooks.

Q. Yet you don't remember who the parties were?

A. I do not.

Q. Can you tell me the year?

A. It was in 1846, some time.

Q. Do you know what court it was in?

A. I do not.

Q. Did you ever see any paper in it?

A. I might have seen some.

Q. Do you remember that you ever saw a paper that had the name of anybody, in that suit, as attorney, solicitor, counsel, or any thing else?

A. No, sir, I don't; I only remember from what Judson told me and Brooks said.

Q. What did Judson tell you?

A. He said, in substance, that he was counsel in the case. And it was so understood by Brooks, who came there frequently to consult with him.

Q. Do you know what it was about?

A. I do not. I have no recollection except of there being such a suit.

Q. You don't know whether it was about India rubber or a horse?

A. I do not.

Q. You say that Judson had no capital in the concern of Brower & Brooks; were there any articles of co-partnership by which that firm was organized?

A. No, sir.

Q. Never?

A. Not to my knowledge.

Q. How long did it continue?

A. Up to January, 1847.

Q. You have been asked whether there was a suit about it?

A. I said there was a suit between Judson and Brooks at a subsequent period.

Q. What year was that suit?

A. I think in 1847; it might have been in 1848.

Q. Who was the plaintiff in that suit?

A. Mr. Brooks, I think.

Q. Wasn't it a bill filed in equity, by Judson against Brooks, for a dissolution of that firm of Brower & Brooks?

A. No, sir; I think not; I think I had no interest in that suit at all.

Q. No matter about your interest.

A. You spoke of using my name; I think I had no interest.

Q. Didn't you make an affidavit in that suit, to be used on a motion for injunction?

A. I think I did.

Q. Is that your writing (handing him a paper)?

A. That is my writing.

Q. Now see if that reminds you of what that suit was?

A. Well, sir, my memory is not refreshed even by that, because I do not know who was the plaintiff or defendant in the case. I have no recollection any further than as the paper is indorsed. I know that is my hand-writing to that affidavit.

Q. Do you know John B. Staples?

A. I do.

Q. The son of Seth P. Staples?

A. Yes, sir.

Q. He was solicitor in chancery in 1847, and you knew him then?

A. I knew him then; whether he was solicitor or not I do not know. He acted as attorney for Judson in that case.

Q. Who acted as counsel? Did he argue in Judson's own case?

A. I cannot tell you; I was only at the session of the court during the time of giving my affidavit.

Q. Were you not in court during the time the argument was had before Judge Edmonds?

A. I think not.

Q. Then you do not know, of your own knowledge, who acted as counsel?

A. I only judge from this; that the examination was conducted when I was on the stand by John B. Staples.

Q. Were you on the stand in that case?

A. I think I was in court in that case.

Q. Did you make this affidavit in court?

A. I did make an affidavit in a case between Brooks and Judson, in court, and I supposed that was the same one.

Q. Was not that in the police office?

A. No, sir.

Q. Was not there any proceeding at the police office connected with that case?

A. If there were I have forgotten it; it is possible.

Q. Didn't you institute a suit against Brooks for perjury, connected with that copartnership?

A. Well, I have some recollection that something of that sort was mooted, but whether it was carried to a suit or not I am not able to say.

Q. Is that your writing? (handing him a paper).

A. That is my writing; I wrote that letter.

Mr. BRADY. I will read this letter.

WITNESS. Let me see; one word—when I was asked in regard to the suit between Judson and Brooks, I supposed it referred to a suit subsequent to this; but I think Brooks claimed damages against Judson.

Q. That was a suit in the Superior Court?

A. Yes, sir, I think it was.

Q. There is still another suit?

A. I make this explanation for this reason: that I was in doubt, and supposed Judson was the defendant in that suit, because he was so in that subsequent suit.

Mr. RICHARDSON objected to the reading of the letter.

Mr. BRADY. I will prove the facts in it.

Q. You have stated that Judson put in no capital into the firm of Brower & Brooks: who did?

A. Well, sir, we had no capital.

Q. There was no capital in it?

A. No, sir.

Q. You had none?

A. I had none.

Q. And Brooks had none?

A. No, sir.

Q. What was the business?

A. Selling goods on commission.

Q. You state positively, as matter of recollection, that there was no capital in that concern?

A. I do state positively.

Q. Have you ever said to the contrary?

A. Not to my knowledge.

Q. Have you ever sworn to the reverse of that?

A. I think not.

Q. Did you ever swear that the firm of Brower & Brooks was composed of Samuel Brooks and Wm. Judson?

A. No, sir.

Q. Did you ever swear that Judson was the principal partner, and had the principal direction and control of that firm?

A. No, sir.

Q. Did you ever swear that on the dissolution of said firm, about the 26th of January, 1847, you retired from it?

A. Yes, sir.

Q. And that on the dissolution the business was continued and carried on at the same place by Judson & Brooks, under the name of Samuel Brooks?

A. I did.

Q. That you were retained in the store of Judson & Brooks as salesman, and acted as salesman as well as purchaser of goods till the dissolution, about the 20th of August, 1847?

A. Yes, sir.

Q. That you were well acquainted with the arrangements of Judson & Brooks, carrying on the business under the name of Samuel Brooks?

A. Yes, sir.

Q. That they were all made under your own observation or in your presence?

A. Yes, sir.

Q. That Brooks contributed no stock or capital to any considerable amount to said concern?

A. Yes, sir.

Q. That the stock and capital in the said concern were pretty much all contributed and paid in by the said William Judson?

A. I did.

Q. How much did he put in?

Mr. RICHARDSON objected to the inquiry as something which he had not gone into.

Mr. BRADY said that the question was asked by Mr. Richardson whether Judson put any capital into the concern of Brower & Brooks, in 1846, and if there was any purpose or object in that inquiry, he wished to show that the only person who put one cent into that concern, which originally was Brower & Brooks, and subsequently Samuel Brooks, was William Judson.

Mr. RICHARDSON said it might be material to show whether Judson had any capital in 1846, but that had nothing to do with his putting it into their firm.

The Court ruled that the counsel might cross-examine in relation to the question whether Judson was a lawyer or not, but not in relation to how much capital he put in.

Q. Can you remember the precise date at which the firm of Brower & Brooks ceased to exist?

A. I have stated in that affidavit that it was the 26th of January; I knew it was in that month.

Q. Here is a statement that except when sick or necessarily absent, the said Judson has spent most of his time at the store, 100 Broadway, where the business of the said firm of Samuel Brooks was transacted, and he has devoted his time and attention to said business, and has acted in, directed and controlled the said business of said concern as principal partner therein?

A. That is true.

Q. Then he was principal partner?

A. That was the firm of Samuel Brooks.

Q. I understand it. What became of the books of Brower & Brooks?

A. They went into the hands of Judson, I think.

Q. What date?

A. Really I forget; probably in July or August of that year, at the time Brooks left, and Judson took the entire charge of the establishment, I think, under the name of the Goodyear India rubber warehouse.

Mr. BRADY wished to know whether this witness was to be recalled.

Mr. RICHARDSON said he had no present expectation of calling him again.

Mr. BRADY. I asked the question for this reason; I have a letter of Mr. Brower's which relates to the pecuniary circumstances of Judson.

The COURT. You must make him your witness if you want to hold him.

Mr. BRADY said he would reserve it till some other stage of the proceedings.

MR. WALDRON, RE-CALLED AND EXAMINED BY MR.
RICHARDSON.

Q. Did you serve that paper on Mr. Judson? (handing him a paper.)

A. I served this paper.

Q. At what time did you serve it?

A. July 2, 1853, at 8½ o'clock in the morning.

Mr. RICHARDSON read the paper, being a revocation of the power of attorney, in reference to the extended patent, dated July 1, 1853, sealed in presence of T. A. Jenckes and Thomas S. Anthony.

Q. Did you deliver, on the same day, a paper to Judson, of which this is a copy, signed by H. H. Day? (handing the paper.)

A. I served the original, of which this is a copy.

Q. At what precise date?

A. July 2, I think, about 10 o'clock.

Mr. RICHARDSON read the paper, dated July 2, being a notice to Judson of the purchase of the Chaffee patent and improvement, together with a tender of the money paid by Judson to Chaffee on account thereof.

MR. CHAFFEE, RE-CALLED AND EXAMINED BY MR.
RICHARDSON.

Q. You sold your original patent to the Roxbury company, did you?

A. I did.

Q. How much did you get for the original patent?

Objected to as wholly immaterial.

Mr. RICHARDSON said that the object was to contradict the evidence put in on the other side, about the amount that Chaffee received for that patent.

The COURT, after hearing the argument, ruled out every thing in regard to the amount that Chaffee received for that patent.

Q. When did you first contemplate, say any thing, or do any thing, or hear any thing about the extension of your patent?

A. Some time in 1849, I had some conversation with Mr. Hodgeman on the subject.

Q. Was he one of the Goodyear licensees at that time?

A. I do not know whether he was or not; my belief is that he was not.

Q. Can you fix about the date of that?

A. It was in the winter of 1848-9, or spring of 1849.

Q. Up to that time had any thing been said between you and Goodyear about it?

A. There had not.

Q. State what the purport of that conversation was with Mr. Hodgeman?

A. The matter was to get both mine and the Atkinson patent extended, and to be interested in the two as a sort of partnership.

Q. Did you make an arrangement with Mr. Hodgeman?

A. I did not.

Q. When did you next have any conversation about it?

A. My next conversation was with Mr. Goodyear.

Q. When and where was it?

A. It was in New York, in the winter of 1849-50.

Q. Did you have any conversation with any body between these times on the subject?

A. I believe I had some conversation with a Mr. Ames in relation to it.

Q. Before you did with Mr. Goodyear?

A. Before.

Mr. BRADY. These conversations are of no consequence.

Mr. RICHARDSON. Conversations were allowed on the same subject between Judson and others in New York.

Q. Did you first apply to Goodyear about it, or he to you?

A. I first broached the subject to him.

Q. Did it result in your making an agreement?

A. It did.

Q. State the precise terms of that agreement as it was first.

Mr. BRADY. Was it in writing?

A. It was.

Mr. BRADY. Then you will produce it.

Q. (Handing witness a paper.) Is that the agreement it finally resulted in?

A. It is.

Q. In whose handwriting is that paper?

A. Part of it is Mr. Goodyear's, and part, I believe, in his son's, or Mr. Judson's; I cannot be positive.

Q. Look at the other part of this and tell us whose handwriting that is in?

A. It looks like Goodyear's.

Q. Do you find Judson's handwriting there at all?

A. I cannot be positive whether I can or not.

The COURT. Do you speak of the one you last saw?

Q. In either?

A. Mr. Judson wrote a part of the agreement, in the first place, which Mr.

Goodyear's son copied; and Mr. Goodyear finished one or the other part himself. That I state from my recollection.

Q. At what place was that paper made?

A. At the Union Place Hotel, New York.

Q. Where is that located?

A. At the upper end of the city, on Union Square.

Q. You say that Judson wrote a part of it, which Mr. Goodyear's son copied?

A. I think he copied the part that Judson wrote, and then Goodyear finished one or the other of them.

Q. And you say that Judson wrote down to a certain point, that Goodyear's son copied as far as he wrote, and then Goodyear finished it?

A. He did.

The COURT. Then Judson made the draft?

Mr. RICHARDSON. Not the whole of it—only down to a certain place.

Q. Did Judson leave there before the paper was finished?

A. He did.

Q. Do you know where he went, and what he went for?

A. I do not know where he went, nor what he went for, of my own knowledge.

Q. How many conversations did you and Goodyear have before this paper was signed?

A. We had had several in relation to it.

Q. Was there, about that time, any arrangement between you and Goodyear in reference to your going into business with him?

A. There was.

Q. Was that about the same time with this contract?

A. That was talked over in our earliest conversations in respect to the terms of our agreement.

Q. Was that agreement about your going and taking an interest in Goodyear's business, ever consummated?

A. It never was.

Q. Was the *agreement* consummated?

A. It was consummated.

Q. When?

A. Previous to April, 1850, some time.

Q. What was that agreement?

Mr. BRADY objected to any negotiations which led to the agreement of May 23, 1850, as inadmissible.

Question argued; objection sustained.

Adjourned.

NINETEENTH DAY.

PROVIDENCE, *Thursday, Feb. 15, 1855.*

TESTIMONY OF CHAFFEE.

MR. CHAFFEE. EXAMINATION CONTINUED BY MR.
RICHARDSON.

Q. Were these two parts of the papers of the 23d of May made between you and Goodyear then delivered one to the other?

A. They were.

Q. What did you do with yours?

A. I kept it in my possession at home.

Q. When did you next see it?

A. I do not remember of seeing it till after the extension some time.

Q. State now whether you employed any body as counsel or attorney to procure that extension; and if so, who, and under what circumstances. State all the circumstances connected with it that you recollect at the beginning.

A. I consulted with Goodyear in the first place about employing some one. He thought I might as well, perhaps, see Judson & Staples, and I went to New York. I had some conversation with Goodyear in relation to employing some one, and it was decided that I should go to New York and see Mr.—

Q. What did Goodyear say about it?

A. He thought I might as well employ Judson & Staples.

Q. Did he give any reason for it?

A. He thought they were conversant with patents, as much so as any one. Mr. Staples in particular.

Q. Was that before the final signing of the contract that you had with Goodyear?

A. That was before.

Q. State whether you had any conversation with Judson & Staples, or either of them, prior to the signing of that paper?

A. At or about the time of signing it I saw Mr. Judson and asked him if he could accommodate me in paying the expenses of the extension. He said he would. Mr. Goodyear had previously—

Mr. BRADY. What Goodyear had previously done is excluded by the ruling of the Court.

The COURT. I have not excluded that; I have admitted evidence to show whether Judson was his attorney or not on one side, and I certainly shall on the other.

Q. What did Goodyear say to you about the expenses?

A. He told me that he would not be able to pay the expenses of the extension, but he thought Judson would accommodate me.

Q. (By the COURT.) You said you saw Judson and asked him whether he could?

A. I did afterwards, after what Goodyear said.

Q. What did he say?

A. He said he would.

Q. Up to the time of this conversation with Judson state whether you had ever heard any thing said in relation to any interest of the Goodyear licensees in this patent?

A. I had never heard.

Q. State whether you had heard any thing said upon the subject?

A. At an early date, about the time Goodyear bought the patent—

Q. Not at that time; I refer to the time of the conversation about this extension.

A. I heard Mr. Goodyear say, when I inquired of him in relation to who could have any interest in using the extension, that there was no one who could claim any right to use it by reason of any previous use of it. That was a question that we had some talk about.

Q. Did you hear any thing else said about the licensees?

A. I do not recollect of any thing else.

Q. (By the Court.) What time was this?

A. It was some time prior to the 23d of May.

Q. Was that after or before you finally completed your arrangements to let Goodyear have the extension, not the final written agreement, but the agreement to make it?

A. It was while we were negotiating in relation to it.

Q. Did you say any thing to Judson about his acting in the matter?

A. I did.

Q. What did you say?

A. I asked him if he would act for me in procuring the extension—attend to the taking of depositions.

Q. What did he say?

A. He said he would.

Q. Did you speak to any body else about it?

A. I spoke to Mr. Staples in regard to it. Mr. Staples, in the first place, asked me if I wished him to act in procuring the extension, and I told him I did.

Q. Mr. Staples first spoke to you about it, did he?

A. He did; at least at that interview, the first that we broached the subject. I had been to him before and was shown the original patent in his possession before that.

Q. Was there any conversation between you and Goodyear after, or at the time of making that paper of the 23d of May, about what course he should take in reference to the extension personally, and what course you would take as to being active in the matter?

A. I do not recollect of any thing being said after the 23d of May in relation to it.

Q. Before the making of that paper was there any thing said about what you should do, or what Goodyear should do?

A. Mr. Goodyear was to pay the expenses. He had agreed to pay the expenses, but as to his acting in any way, I do not remember of his saying any thing.

Q. Was there any thing said about what you should do?

A. It was understood and determined that I should go to New York to see Judson & Staples about the extension.

Q. You have already stated that you were present at the taking of testimony in that matter; were Judson & Staples present at any portion of it?

A. Mr. Judson was nearly all the time; Mr. Staples was present occasionally.

Q. State whether or not you had any consultations with them in relation to the mode of proceeding?

A. I was constantly advising with them in relation to it.

Q. During that advisement with these counsel of yours, state whether there came up any consideration of the question of what you were to receive in case it was extended from Goodyear.

Mr. BRADY. I object to that as irrelevant.

After some discussion, the Court considered it as inadmissible, unless connected with representations made at the time.

Mr. RICHARDSON. I will then skip over, and go to the interview at Mr. Staples' house.

Q. State whether originally, when you were conversing in relation to this original extension, any point arose in the case—

(Objected to.)

The COURT. I think you had better go to what was said at the house.

Mr. RICHARDSON. I do not propose to go back of the time when they were taking the testimony, but to within five days of the time they were on their way to Washington.

The COURT. That is so near the time that I should think it admissible.

Q. After you got your testimony taken, and started to go to Washington, who went with you?

A. Mr. Judson; Mr. Woodman followed next day. He was to have accompanied us, but did not happen to meet us.

Q. Have you become any more certain than you were originally, whether Judson went on with you to Washington?

(Objected to, as leading.)

Q. Are you uncertain whether Judson went on with you or not?

A. I cannot be positive whether he went in the same train; it is my impression that he did.

Q. State what day of the week you went to Washington?

A. I left New York on Friday, and arrived there on Saturday.

Q. How long were you in Washington?

A. About a week; I was at Washington the next Saturday.

Q. Did you leave Washington before or after the extension?

A. After.

Q. Either on your way to Washington, or while in Washington, did you have any conversation with Judson in reference to Mr. Goodyear?

A. I did.

Q. Was it while you were in Washington or on your way to Washington?

A. While I was in Washington, to the best of my recollection, Mr. Judson told me that he didn't believe Goodyear would ever carry out his agreement with me, that he would never pay the expenses of the extension or my salary, including what he had agreed to give me for the extension.

Q. Did he give any reasons?

A. He said Goodyear was poor, and unable to pay, and that he had exhausted his friends. I told him that I was aware that he was poor, but I believed he could in some way carry out his agreement.

Q. At that time was there any conversation about what these agreements were? was it talked over between you and Judson, or mentioned?

A. I think it was more general; that he would not be able to carry out his agreements or engagements with me in relation to the extension. I understood it to mean all his—

Mr. BRADY. I object to that part.

Q. Had you at that time given any deposition on the extension?

A. I had.

Q. Was there any statement contained in that deposition in reference to these agreements?

A. There was.

Q. Previous to that time had there been any conversation between you and Judson in regard to the contract between you and Goodyear, by which you were to have an interest in his glove business?

Mr. BRADY. I object to that; it includes all time previous.

Mr. RICHARDSON said it was precisely the same question that was put in New York, and he expected precisely the same answer, and showed the answer to the Court.

The COURT ruled that as the question was irrelevant it could not be allowed.

Mr. RICHARDSON then claimed that as the relation of attorney and client had been established, he had a right to show all that was said between them.

The COURT ruled out the evidence, as not sufficiently connected with the agreement of the 5th of September.

Q. Did Judson remain with you during the week at Washington?

A. He did.

Q. In what capacity?

- A. As my attorney.
- Q. Did you have consultations with him?
- A. I did.
- Q. Was Mr. Staples there?
- A. He was not.
- Q. State whether Judson, in pursuance of his agreement, did in fact go on and pay any portion of the expenses from time to time?
- A. He did pay moneys, which went to the expenses of the extension.
- Q. What day was it that you returned to New York?
- A. I arrived at New York on Sunday evening.
- Q. When did you first see Judson in New York, if at all?
- A. I saw him on Monday.
- Q. What time in the day?
- A. I cannot state exactly; it was about the middle of the day.
- Q. Where did you first see him after you got to New York?
- A. He called at the hotel where I was stopping.
- Q. What hotel?
- A. I have forgotten the name; it was near Canal street, on Broadway.
- Q. Did you have a conversation with him there?
- A. I did.
- Q. Did you remain there with him or go away?
- A. I walked down town with him; to his office, I believe.
- Q. What did he say, if anything, about this patent then?
- A. On the way he repeated pretty much what he had said at Washington; that he didn't believe Goodyear would ever be able to carry out his agreement with me,—pay the expenses of the extension and my salary.
- Q. Did he say any thing about your employment at that time?
- A. He said if I should happen to get out of employment that he would endeavor to furnish me with employment.
- Q. In whose employment were you up to that time, or previous to it?
- A. I was in Goodyear's employment at the time of procuring the extension, up to the time of the taking of testimony.
- Q. (By the Court.) Were you at this time in Goodyear's employment?
- A. I was, up to the time of taking the testimony, as I said.
- Q. (By the Court.) I wish to know in whose employment you were at this time?
- A. I can explain by saying that all my time was deducted in the settlement with Goodyear during the taking of the testimony and procuring the extension.
- Q. When was that settlement with Goodyear made?—after or before the extension?
- A. After.
- Q. State whether he said any thing in relation to the amount of the expenses to you, walking down the street.
- A. I do not recollect of any thing being said as to the amount of the expenses.
- Q. When did you next see him?
- A. I saw him next at Mr. Staples' house, on the evening of the same day.
- Q. How happened you to go to Mr. Staples'?
- A. Mr. Judson informed me that Mr. Staples wished to see me at his house before I left the city.
- Q. Did you go to Mr. Staples' house?
- A. I did.
- Q. Who went with you, if any body?
- A. Mr. Judson went with me.
- Q. What evening was this?
- A. The Monday after my return from Washington.
- Q. At that time who had possession of the original letters patent?
- A. I had.
- Q. Did you find Staples there?
- A. I did.

Q. Did any thing take place there in reference to this extended patent?

A. There did.

Q. State what was first said, or come as near as you can recollect?

A. Mr. Judson asked Mr. Staples if he had a paper prepared, which Mr. Staples produced.

Q. (Handing him a paper.) Is that the paper?

A. That is the paper.

Q. Staples then produced that?

A. He did.

Q. Was it read?

A. It was.

Q. What was said?

A. Mr. Judson desired me to make such an agreement as this—execute such a paper.

Q. Was that \$3,000 in the paper at the time it was read to you?

A. My impression is that it was added at the time—that it was not in when it was first presented.

Q. What did Judson say about it? Did he request you to sign it, and if so, what did you say?

A. He requested me to execute such a paper, or wanted to know if I would be willing to, and I objected.

Q. What did he say?

A. He told me that he thought it would be better for me to do so than any thing I could get from Goodyear; that Goodyear would not be able even to pay me—

The Court (to witness.) State the whole conversation—what the objections were.

Q. State all you can remember of that conversation.

A. After requesting me to execute such a paper I objected to it in the first place, saying that I could do better with Goodyear than with him. I had already made an engagement with Goodyear, which I wished to carry out. He wanted to know what better I could do with Goodyear, and I was bound to tell him how Goodyear had agreed to pay the expenses of the extension, pay me \$3,000, and give me some business considerations besides. He replied that I did not think Goodyear could ever carry them out—that he was poor, owing a good deal of money. I told him that I thought he would be able to in some way, and objected to executing such a paper.

Q. What next?

A. Mr. Staples said something in relation to it. He thought it would be better for me to do it—that I should be doing better myself by making such an arrangement than any thing Goodyear would do by me.

Q. Did you reply to that suggestion of Mr. Staples?

A. I did. My reply was that I expected Goodyear would be able in some way to carry out his agreement, and that I was very anxious to carry out my arrangement with him—that I felt bound to do it.

Q. What next?

A. Then Mr. Judson, after urging upon me to do it, finally said that he had been to all the expense of the extension himself—that he had paid and become liable to pay all the expenses, and that he wanted some security for it, and could not trust Goodyear for the expenses or me either.

Q. Go on.

A. I still declined executing the paper, and he finally got quite excited about it, and threatened to make me trouble if I did not. Mr. Staples remarked that he understood I was pleasantly situated in New Haven with my family, and it would be a pity to have them disturbed.

Q. Was there any thing more from Judson, yourself, or Staples?

A. Judson finally got up and walked the room in great excitement, and told me if I did not execute such an agreement, that I must take the consequences.

Q. State whether there was any thing said about the amount of the expenses by Judson?

A. I inquired of Judson during the conversation, what the amount of the expenses was, and he said he could not tell—that he had not ascertained them; that he thought they could not be less than \$4,000.

Q. At the time Judson was walking the room in that excitement, did he say any thing about who was liable to him for the expenses?

A. He had said that he held me responsible for the expenses. That was why he wished to become secured by such an instrument as this.

A. At that stage of the business what took place, if any thing?

A. After his saying that I might take the consequences if I would not execute such a paper, I immediately left.

Q. Where did you go?

A. I returned to my hotel.

Q. Did Judson go with you?

A. He went out about the same time, and walked a little ways up the street, and out in another direction.

Q. Did he say any thing after he got out of doors?

A. Nothing said but "good night."

Q. Did you see Woodman that evening?

A. I did not.

Q. What next took place about it when you went back to the hotel?

Mr. BRADY objected to the witness stating any thing unless Judson was connected with it.

Mr. RICHARDSON proposed to show what he said to Woodman.

The Court directed the witness not to state any conversation with Mr. Woodman, but whether he saw him or not.

Witness. I saw him next morning.

Q. State whether you told him what had taken place.

A. I did.

Q. Did you make any request of him?

A. I did not.

Q. From that conversation, did you know that Woodman was going to see Judson?

A. I did.

Q. Did you see Judson again while you were in New York?

A. I did not.

Q. State whether you saw Woodman again after that in New York.

A. I did.

Q. What did he tell you?

Mr. BRADY objected.

Mr. RICHARDSON. Mr. Woodman spoke to Chaffee at the request of Judson.

Mr. BRADY contended that Mr. Woodman swore that he did not see Chaffee again in New York.

Mr. RICHARDSON said that it was immaterial whether it was at New York or New Haven; there might be a discrepancy between the witnesses, but that did not make the testimony incompetent.

The Court allowed evidence that went in corroboration of what Mr. Woodman swore to.

Q. At any time after you left Woodman that morning, before you finally signed the paper, or before you met Judson in New Haven, did Woodman bring you any word or tell you any thing that Judson had said to him?

Mr. BRADY objected; objection overruled.

A. He did, both at New Haven and at New York; he brought me a message from Judson.

Q. What was that message?

A. It was the request that I should remain in New York and see Judson.

Q. Did you remain?

A. I did not.

Q. Where did you go?

A. I left for New Haven.

Q. What day did you leave New York?

A. I left on Tuesday.

Q. What time in the day?

A. About noon; I do not remember the exact hour.

Q. Where was the original patent at that time?

A. In my possession.

Q. What time did you get home?

A. In the afternoon—in the night.

Q. Did you see Goodyear at that time?

A. I did not.

Q. Did you know where he was?

A. I was informed that he was in Naugatuck.

Q. Who informed you?

A. My wife.

Q. When did you next see Woodman?

A. I saw him the next day.

Q. On Wednesday?

A. On Wednesday.

Q. What time in the day?

A. I do not recollect what time it was.

Q. When did you next see Judson?

A. To the best of my recollection it was on the evening of the 5th of September. I do not recollect where else I saw him at any rate.

Q. What day of the week was that?—was it the next day after Woodman came up?

A. I cannot be sure, but I think it was the next day.

Q. During this time had you seen Goodyear?

A. I had not.

Q. Had he returned to New Haven, to your knowledge?

A. He had not.

Q. When you first saw Judson, cannot you refresh your recollection, so as to say where it was—whether at your house or elsewhere?

A. To the best of my recollection I was informed by Woodman—possibly by Judson himself—that he would call at my house in the evening to make some arrangement in regard to the extension.

Q. Did you know from any source that Judson was coming, before he came? (Objected to.)

Q. Did Woodman tell you?

A. He did.

The Court here said he would only allow the witness to state whether what Woodman told him came from Judson.

Q. Is there any thing you have not stated that Woodman told you as coming from Judson?

A. Nothing, except the threats he had made. He said that Judson still insisted upon it that I should make such an agreement with him—that he believed he would press the matter—that he intended to press it, and was coming to New Haven for the purpose of pressing the matter.

Q. In your opinion at that time, when you met on the 5th of September, what was your extended patent worth?

Mr. BRADY objected to the question as wholly immaterial.

Mr. RICHARDSON contended that the value of the patent could not in its nature be proved in any other way.

The Court ruled that the inquiry should be put as to what the patent was worth.

Mr. BRADY excepted to the ruling.

Mr. RICHARDSON. I will put the question in two ways. I will first ask distinctly what the value of the extended patent was at that time, and I will then ask his opinion and take the ruling of the court upon it.

WITNESS. It was worth, in my opinion, \$25,000 a year—not less than that.

Mr. BRADY. We take an exception to question and answer.

Q. In whose handwriting is that paper? (handing him a paper)

- A. I think it is Mr. Judson's.
- Q. (By Mr. BRADY.) You say it is Judson's writing?
- A. I think it is.
- Q. Did you ever see that paper in the possession of Judson before the time when he was acting as your counsel?
- A. I could not state positively whether it is in Judson's handwriting or not.
- Q. Was that paper prepared and sent on to the patent office during your application or filed there?
- A. It was.
- Q. Do you know who sent it on?
- A. I do not.
- Q. This paper you say was prepared in the progress of that proceeding and sent to Washington?
- A. It was.
- Q. Do you remember who was present when it was drawn up?
- A. I have some recollection of Mr. Staples being connected with it, but I cannot be positive; it seems to be subject matter that Mr. Staples and I had something to do with.
- Mr. RICHARDSON. We will offer the paper now. It purports to have been filed by the clerk, Feb. 5, and is marked received, Aug. 15, 1850.
- Q. Now to go back to the 5th of September; you have said already that you met Judson at your house; do you know who came there first that evening?
- A. According to the best of my recollection Woodman and I were already there, and Judson and Candee came there together.
- Q. What took place there?
- A. Judson exhibited a copy of the agreement of the 5th of September.
- Q. Was it this? (showing a paper.)
- A. It was another paper; it was one which was executed there that evening.
- Q. He had another copy besides this?
- A. Another copy besides that.
- Q. Did he also bring that?
- A. He presented that first and afterwards this.
- Q. Were the blanks filled up in the one he first presented?
- A. They were, to the best of my recollection.
- Q. What was said about your executing it there?
- A. He tried to prevail upon me to execute it.
- Q. Did you say the blanks were filled in one of these papers?
- A. I said they were to the best of my recollection—the blanks in relation to the consideration; indeed I do not remember of any blanks that were not filled.
- Q. At what sum were they filled?
- A. At \$1,200 a year, to be paid quarterly.
- Q. Please narrate what took place as near as you can.
- A. I cannot give the exact language.
- Q. The substance of it.
- A. The substance of my objections were, that I had already an agreement with Goodyear, which I was desirous of carrying out.
- Q. Did you state what it was?
- A. I do not recollect that I stated definitely; it was already known as I suppose.
- Q. What did he or anybody say, if any thing, when you made that objection or renewed it?
- A. Mr. Judson thought it would be better for me to make an arrangement with him than with Goodyear—that it would be doing better for me to do so. I at last consented, on condition that he should pay \$1,500 a year, quarterly, pay \$1,500 down, and make some alterations on the paper.
- Q. State whether any thing was said about expenses—any allusion to your conversation in New York.
- A. It does not now occur to me what was said in relation to expenses there,

if any thing, except that he was to pay the expenses: he agreed to pay the expenses as well as the quarterly payments.

Q. Was any thing said about the amount of them there?

A. The amount had not been ascertained at that time.

Q. Had you any knowledge about how much the expenses were?

A. I had not ascertained what they were.

Q. Had you made inquiries of Judson for that purpose?

A. I had previously made inquiries for that purpose; I did inquire at New York.

Q. You say you were to have \$1,500 down?

A. I should have said that that paper was to secure Judson until he could obtain the expenses of the extension.

The Court directed the witness to state what Judson said, if any thing.

Q. What did Judson say?

A. Mr. Judson said he would see the licensees and see that they took their licenses under that paper.

Q. (By the Court.) See them for what purpose?

A. In relation to the \$1,500 to be paid down.

Q. State what he said about the licensees?

A. He stated in substance what the paper stated—that he should go on to New York and see them about the money—the \$1,500.

Q. Did he state any thing about having seen them prior to that time?

A. He did not.

Q. You say he said he would go and see them?

A. In relation to the other \$300, I think it was additional, making \$1,500 payable, quarterly.

Q. Did he say that he had seen them in relation to the \$1,200, or any thing about that?

A. He did not.

Q. State whether there was any conversation about his having seen them after he left New York, in relation to their coming in and paying the \$1,200 a year.

A. There was not.

Q. Did he tell you the purpose for which he wanted that paper? was there any thing said about security?

A. He told me the purpose was for security, at N. York, and in N. Haven, if I remember right.

Q. Security for what?

A. For the expenses of the extension.

Q. Did you ask him any thing about the legal effect of that paper?

A. I think I did.

Q. How happened you to ask him?

A. I asked him in relation to both names being on the paper; I told him I thought they ought to be—both names on each paper.

Q. What did he say to that?

A. He thought it was not necessary—that it was well enough as they were.

Q. Did he state any thing about the effect of the last clause in the paper?

A. He did.

Q. What did he say?

A. He said it was unnecessary to put that last clause in, as the fee was in me, but he would do so if I wished it.

Q. Was there any thing said in reference to these recitals about the contract with the licensees, between you and Judson?

A. I told Judson that these recitals were not true.

Q. What did he say in reply?

A. He said it did not matter much what the recitals were.

Mr. RICHARDSON read recitals the 2d and 3d to the witness, which he said were not true.

Q. (Handing witness the paper of the 5th of Sept., with the seal attached.) Is that paper signed by you?

A. It is.

Q. At the time you signed your name to that paper, and delivered it, was that seal upon it?

A. It was not, to the best of my recollection; I did not see it there.

Q. Was there any thing said at that time between you and Judson, about having the papers exactly alike?

A. There was.

Q. What was it?

A. I told Judson that both names ought to be to each paper.

Q. Was that \$1,500 down any part of the \$1,500 a year?

A. It was not; it was \$1,500 down, and \$1,500 a year, quarterly.

Q. While you were executing these papers, or after, or at any other time, did Charles Goodyear come into the room?

A. After they were executed he came there.

Q. Were the papers about at the time he came in?

A. They were hurried out of the way when it was mentioned or ascertained that he was coming.

Q. Who mentioned that he was coming, or how did you ascertain it?

A. I believe I remarked that Goodyear was coming or that his carriage had driven to the door.

Q. Had you seen Goodyear up to that time after you had arrived home?

A. I had not, I did not know that it was his; I supposed it was his.

Q. You remarked that he was coming; what was done then?

A. Mr. Judson immediately put his paper in his pocket and requested me to remove the papers out of the way, which I did.

Q. Did you get them out of the way before Goodyear got in?

A. I did.

Q. Did Goodyear come in?

A. He did.

Q. What was the course of the conversation after he got in?

A. Some general conversation in relation to the extension.

Q. State whether he inquired if it had been extended.

A. He did make such an inquiry.

Q. Was he informed?

A. He was so informed—that it had been extended.

Q. State whether anything was said by any of you in his presence while he remained there, in relation to this affair between you and Judson.

A. There was nothing said in relation to this at that time.

Q. With whom did Goodyear leave that night?—who remained, who left, and at what time?—and did you have any refreshments brought in?

A. Mr. Goodyear did not stop long. Refreshments had been brought in some time in the course of the evening, if I remember right.

Q. Was that after or before Goodyear came?

A. It must have been before, or after all had left; my impression is that it was before Goodyear came in.

Q. Did Judson leave your house that night?

A. He did.

Q. Before he left did he have any conversation with you in reference to what you should do with your part of the paper?

A. He requested me to give my paper to Mr. Woodman. We met at the cars on Woodman's leaving for Boston.

Q. Was this request made that night or the next day?

A. It was the next day.

Q. Where did you see Judson the next day?

A. I saw him at the depot on the cars.

Q. What did he say to you about the paper?

A. He requested me to give my paper to Mr. Woodman.

Q. What did he tell you he wanted to give it to Woodman for?

A. So that if Goodyear asked to see the paper I could tell him I had not got it.

- Q. Did you give it to Woodman for that cause?
- A. I gave it to him at Judson's request.
- Q. Was there any thing said on the night of the 5th of September about making a new paper, or altering the one already made by putting in \$1,500 instead of \$1,200?
- A. There was.
- Q. Why was not the \$1,500 put into the paper that night?
- A. Mr. Judson said that it had got to be late, and he could not redraw the papers then, but that he would do so—that he would attend to it after his return to New York.
- Q. The next day where did you go?
- Objected to as immaterial.
- Q. When did you first see Goodyear after that?
- A. I saw him the next day I think.
- Q. Did he ask you about this, or did you mention it?
- A. There was nothing said about it at that time.
- Q. When did you go to Naugatuck, if you went at all?
- A. I think I went in the early part of the following week, as near as I can remember.
- Q. Had you ever been at work at Naugatuck for Goodyear before you went on to Washington about this extension?
- A. I had.
- Q. Did you go back to your employment?
- A. I did.
- Q. Prior to your going back to your employment had you informed Goodyear in any way of this transaction between you and Judson?
- A. I had not.
- Q. Did you first inform him by letter or otherwise?
- A. By letter.
- Q. Is that the letter you wrote to Goodyear (handing him a letter, dated September 9th, 1850)?
- A. That is the letter.
- Mr. RICHARDSON read the letter.
- Q. When did you see Goodyear again after you wrote that letter?
- A. I saw him two or three days after, I should say.
- Q. Where did you see him?
- A. At Naugatuck?
- Q. What were you doing at Naugatuck?
- A. I had gone back there and was making experiments for him?
- Q. Was any allusion made to this letter or the subject of it?
- A. Goodyear wanted to know what I had been doing with the extension of my patent. I told him I had been making Judson some security for the expenses of the extension. He wanted to know how I could do such a thing without consulting him, knowing as I did how little dependence he could place on Judson. I told him it was not a matter of choice—that I had been compelled to by Judson's threatening to make me trouble in relation to the expenses.
- Q. What did Goodyear say?
- A. He said, that rascally Judson was always stepping in between him and his arrangements, interfering with them—that he did not blame me so much as he did him in the matter; he however could not give me any further employment—did not feel himself obligated to carry out his agreements with me.
- Q. Did he discharge you and did you leave?
- A. I remained there experimenting for myself a while.
- Q. Did you leave his employment?
- A. I did pretty much; occasionally I did some few things for him.
- Q. Did he discharge you then distinctly?
- A. He then did discharge me distinctly; I so understood it.
- Q. Had you any business then when he discharged you—any employment?
- A. None except experimenting for myself.
- Q. Did you afterwards have a settlement with Goodyear for your services?

A. I did.

(Objected to.)

Mr. RICHARDSON. I do not know but it has already been stated, when he said that Goodyear deducted the time he spent at Washington.

Q. State whether you have ever ascertained the amount of these expenses.

A. I never have.

Q. Was Goodyear indebted to you at the time of the application?

(Objected to as irrelevant; objection sustained.)

Q. Did you go back into Goodyear's employment again?

A. I did.

Q. How soon did you go back after the conversation of the 9th of September?

A. About two months, or a little less.

Q. Did you execute this paper? (handing his paper of November 12th, 1851.)

A. I did.

Q. Was there a counterpart to it?

A. There was.

Q. Is that it? (handing him the counterpart.)

A. That is it.

Q. By whom is that paper drawn up?

A. Mr. Judson first showed it to me. I do not know who drew up the first draft; I think it was copied by Mr. Jarvis; they appear to be both in the same hand-writing.

Q. Prior to the making of that paper, had you any interviews with Judson, after making the first contract?

A. I had.

Q. Had you written him any letters?

A. I believe I had.

Q. Look at this letter and say if it is yours? (handing him a letter.)

A. That is my signature.

Q. Did you write that letter?

A. I wrote it.

Q. Did you receive that one from him? (handing another letter.)

A. I did.

Mr. JENCKES read the two letters, the first dated Sept. 14, 1850, and the second Sept. 16, 1850.

Mr. RICHARDSON asked the counsel on the other side to give him the letter from Chaffee to Judson, which was without date; which was accordingly produced, identified by the witness, and read. Also, a copy of a letter from Judson to Chaffee, dated November 1, 1851, which was likewise identified and read.

Q. Did you have any interviews with Judson in 1850 and 1851, in New York, before making this paper of November 12?

A. I did.

Q. Had you been there for the purpose of getting an amendment to the paper?

A. I had.

Q. How many times?

A. Several times; two or three.

Q. Did you get it amended; or, if not, why, and what took place?

A. I went with Judson to Staples' office to see if Mr. Staples would draw up a paper.

Q. When was that?

A. I cannot fix the date exactly; I think one time in November, and a month earlier than the interview.

Q. What took place the first time, when you went to Mr. Staples' office?

A. Judson requested Staples to draw up a paper, and stated that I wished to convey to him my interest in full in the extension patent—he wished him to draw up a paper for that purpose.

Q. What next?

A. Mr. Staples inquired if that was so. I told him it was not—that my object was to get a paper securing to me the further payment of \$300 a year, which had been agreed upon.

Q. What was done then?

A. Mr. Staples asked if we could agree upon any thing—what it should be, and said he would draw it up.

Q. Did you make any offer to agree before him?

A. Mr. Judson told Mr. Staples that he knew pretty well what he wanted, and wished him to draw up a paper to meet his wishes.

Q. Well, sir?

A. Mr. Staples said he could not draw up any thing without first knowing exactly what was wanted. Mr. Judson finally told me I might call another time, and he would have the papers prepared.

Q. Did you call again, and when?

A. I called twice, when pretty much the same conversation took place.

Q. Did you finally find the paper prepared when you called?

A. I never did at Mr. Staples' office.

Q. Any where?

A. On the 12th of November I found a paper that was executed.

Q. At whose office?

A. At Mr. Judson's.

Q. Was it prepared when you went there?

A. It was.

Q. Was it this paper of the 12th of November?

A. It was a draft of it; whether it was one of these I cannot possibly say. He requested me to wait till it was copied, before I executed it.

Q. You cannot say whether this is a draft, or whether two copies were made; is one of these one that was prepared before you went there?

A. My belief is that one of them was.

Q. Didn't you say you could not be positive whether two copies were made or one?

A. There was only one shown me at first.

Q. Are you positive that either of these was the one shown you at first?

A. I cannot be positive about it.

Q. At that time did Mr. Judson make any statement to you in reference to what he had done with the licensees, about the expenses?

A. He said he had not been able to bring—

Q. Stop a moment; I will not ask you the question in that form. Had Judson, at that time, paid you promptly the quarterly payments?

A. He had not.

Q. Did he give you any reason for neglecting the payment?

A. At the time of executing the papers, he said he had not been able to bring the licensees to terms—that the papers were not such as would enable him to compel them to come to terms; or something to that import.

Q. Did he say any thing about their taking licensees?

A. He said they had not taken any.

Q. Did he say any thing more on that subject?

A. It don't occur to me now what else, if any thing.

Q. Did he say any thing to you in reference to his desire to alter this paper for any purposes, and if so, what purposes?

A. He was to alter it for the purpose of bringing them to terms—paying their portion of the expenses of the extension.

Q. Did you ever at any time learn, and if so when, of Judson's giving a license to the New England Car Spring Company to use your patent?

Mr. BRADY objected to such proof, when the license was in writing.

Mr. RICHARDSON proposed to prove only the fact of when he first knew of that license.

Question allowed.

Q. When did you first hear of a license from Mr. Judson, or a sale to the New England Car Spring Company of your patent?

A. I do not remember the day exactly; I think it was in December, previous to my sale to Mr. Day.

Q. December, 1852. Did you then send for a certified copy of it to the Patent office?

A. I did, or my partner did. I was about to do so, and was informed that he had done so.

Q. (By Mr. BRADY.) Who was that?

A. Mr. Bourn.

Q. Did Judson in any conversation with you, at the time of making the paper of November 12, or any other time, speak to you about it?

A. He did not.

Q. Did he ever tell you of the fact?

A. I have no recollection of his ever telling me a word about it.

Mr. RICHARDSON here read a printed copy of the original license to the New England Car Spring Company.

Q. This you say you never heard of till the fall before you sold to Mr. Day?

A. I do.

Q. Is that the certified copy of this license which your partner procured from the patent office? (showing him the paper.)

A. That is the paper we obtained.

Mr. RICHARDSON proposed to read the certified copy.

Mr. BRADY objected to it as no proof, such as is required by law.

Objection overruled; exception taken.

Mr. RICHARDSON then read the paper, dated December 9, 1850, and recorded November 27, 1851.

Q. Did you know, in 1850, of the existence of such a corporation as the New England Car Spring Company?

Mr. BRADY required proof of the existence of such a corporation.

Mr. RICHARDSON said he would produce the proof under the hand and seal of the company properly authenticated in New York. He then read the act of incorporation to show who the parties were—dated October 9, 1851.

Q. Were you aware of the fact of the formation of that New England Car Spring Company at the time it was formed?

A. I did not know much about it, unless it was by hearsay.

Q. Were you in the office of Mr. Ray about the time the paper of November 12 was executed?

A. I might have been there; I do not remember whether I was or not.

Q. Did you ever in any way assent to Judson's giving that license?

A. I never did.

Q. Did you ever receive any money on account of it?

A. I did not.

Q. State whether or not Judson paid you that annuity of \$1500 regularly.

A. He did pay, to a certain period.

Q. Up to what period?

A. I think it was up to September, 1852.

Q. Did you say September, 1852?

A. I think the December quarter was not paid.

Q. Has he ever paid any thing since that time?

A. He has not.

Q. Did you draw for the last quarter up to December, 1852?

A. I did.

Q. What was the result of that draft?

A. It was protested.

Q. What was the amount of it?

A. \$375.

Q. This is the draft with the protest? (handing him a paper).

A. That is it.

Mr. RICHARDSON here read the draft and protest.

Q. Has that ever been paid?

A. It never has.

Q. Has any subsequent quarter been paid?

A. It has not.

Q. Have you called upon Judson for it?

A. I have.

Q. More than once?

A. I believe I did once after this.

Q. After that protest, did you see Judson in New York?

A. I did.

Q. Did you ask him about it?

A. I did.

Q. Did he give you any reasons for not paying it?

A. He said that he had not been able to obtain any thing from the licensees for the expenses of the extension—that he had paid all he intended to pay, and wished he had not paid so much.

Q. When was that?

A. That was early in January, I think, after the date of this protest.

Q. Was the original \$1500, which was to be paid before this annuity began, paid you?

A. It was.

Q. Did you go to Mr. Candee for any portion of this first \$1500, or receive it from him?

A. I did, I believe.

Q. How happened you to apply to him for it?

A. I applied to him at Judson's request.

Q. You say these payments before September, 1852, were paid promptly, near the time they became due?

A. From the 12th of November till September, 1852, they were paid regularly.

Q. That is, the three instalments after the new paper was made, between the 5th of September, 1850, and the 12th of November, 1851, they were not paid regularly?

A. They were not paid regularly in that interval of time.

Q. But when he paid them, he paid them in quarterly instalments of \$375?

A. Yes, sir.

Q. Then the irregularity consisted in not paying at the time?

A. In not paying at the time.

Q. But each quarter was paid up to September, 1852?

A. It was.

The witness was here shown two receipts—one dated September 19, 1850, of \$1125—and one October 7, 1850, of \$375—and was asked where he was when he was paid the \$1125.

A. I believe I was in New York.

Q. Hadn't you given previous receipts for that same money to Mr. Candee?

A. I believe I had.

Q. At whose request was that made—the \$1125?

A. At Judson's request, I believe.

Q. In whose handwriting is it?

A. It looks like Mr. Candee's.

Q. Was it in Judson's office that it was given?

A. I should think it was there, if any where in New York.

Mr. RICHARDSON here read the receipts of \$1125, being "an advance of an agreement," &c., "conveying" to Mr. Judson the extended patent.

Q. Did you examine, at the time of giving that receipt of \$1125, the expression in it about the "conveyance" of your extended patent?

A. I did not examine it critically.

Q. Where was this receipt of October 7, 1850, made?

A. In New Haven.

Q. In whose handwriting is it?

A. This is Mr. Candee's.

Q. Was Judson present when it was given?

- A. I do not recollect that he was.
 Mr. RICHARDSON read the receipt of \$375 to Mr. Candee.
 Q. That Mr. Candee drew up?
 A. He did.
 Q. You think there were other receipts making these sums?
 A. I think there were.
 Q. Has your attorney, Mr. Staples, ever called upon you for his fees in that extension case?
 A. He has.
 Q. When?
 A. In the summer of 1858.
 Q. (By Mr. BRADY.) At what date?—after the transfer to Mr. Day?
 A. It was after.
 Q. When did he call upon you?
 Mr. BRADY objected to the question as referring to a time subsequent to the transfer to Mr. Day.
 Objection overruled.
 Q. State when, after the performance of this service by Mr. Staples, he called upon you for his fees.
 A. He never called till this time.
 Q. Till when?
 A. The 16th of August, 1858.
 Q. What was the first you heard about it then?
 A. What is contained in this letter; he wished to see me in relation to it.
 Q. What is the date of the letter?
 A. August 16, 1858.
 Q. Did you receive that letter from him?
 A. I did.
 Q. Is that the first you heard about it?
 A. It is.
 Q. Had you said any thing to him about it?
 A. I had not.
 Q. Had you caused any thing to be said to him?
 A. I had not.
 Mr. RICHARDSON proposed to read the letter, which was objected to by Mr. Brady.
 Objection overruled; letter allowed as prima facie evidence of Mr. Staples acting as attorney for Mr. Chaffee.
 The letter having been read—
 Mr. BRADY moved to strike it out as evidence, inasmuch as Mr. Staples was a competent witness to be examined.
 The COURT. It is only evidence in regard to the claim; for other matters I think it is not admissible.
 Q. Did you write to him in consequence of that?
 A. I did.
 Q. Did he afterwards send you a bill?
 A. He did.
 Q. Did you pay it?
 A. I did.
 Q. Did you take that receipt? (handing him a receipt).
 A. I did.
 Q. Is that receipt signed by Mr. Staples?
 A. It is.
 Mr. RICHARDSON read the receipt.
 Q. How did you pay it?
 A. I believe I paid it by a draft on Bourn & Brown.
 Q. Do you know that that draft has ever been paid?
 A. It has.
 Q. Did Mr. Staples render you a distinct bill other than these letters?
 A. I believe he told me verbally in relation to the amount.

Q. Did you see him after he wrote you?

A. I saw him.

Q. He told you the amount?

A. Yes, sir; I will not be sure whether I did receive a bill or not, further than the mention of the sum either in a letter or verbally.

Q. Did you have some letters from him on that subject?

A. I did have letters from him.

Mr. RICHARDSON here handed to the witness two letters from Mr. Staples, one dated September 24, 1853, and the other August 20, 1853, which the witness identified as having been received in reply to a letter from himself. Objection being made to the reading of them by Mr. Brady, they were not offered.

Q. What was the value, in your judgment, at the time that you talked with Judson at Mr. Staples' house, of the amount of compensation you were to receive from Mr. Goodyear for your patent?

Objected to by Mr. Brady; question argued; decision reserved till tomorrow.

Adjourned.

TWENTIETH DAY.

TESTIMONY OF CHAFFEE.

PROVIDENCE, *Friday, Feb. 10, 1855.*

The Court having considered the question raised yesterday, as to whether he should allow the witness to state as to the value of the contract he had made with Goodyear, ruled it out as irrelevant.

The language of the ruling is as follows.—

"I do not see what effect it will have upon the contract of the 5th of September, or of the 12th of November, between Judson and Chaffee. It was no part of the consideration of that contract, of course; neither was it held out to Mr. Chaffee that if he would enter into, perform, or make that contract, it would probably be performed on the part of Mr. Goodyear; on the contrary, that it would not be performed was rather held out as an inducement. It was Mr. Chaffee who was to consider for himself in that matter. It might cast a shade over the minds of the jury; they might, perhaps, think that Chaffee had been injured in consequence of his entering into that contract with Judson. But that is no part of this case. It is not an action against Mr. Judson, nor an action against Mr. Goodyear. The only question here is: whether there was fraud in the concoction of this contract as between Judson and Chaffee."

MR. CHAFFEE CROSS-EXAMINED BY MR. BRADY.

- Q. When did you begin to work for Mr. Goodyear, if at all?
 A. I began to do some work for him in the winter of 1837 or '38.
 Q. And continued with him till what time?
 A. Till the fall of 1839.
 Q. Did you know Mr. Judson at that time?
 A. I did not.
 Q. In the fall of 1839 where was Goodyear engaged in business?
 A. In the summer and up to the fall of 1839, I went up to a factory in operation at Northampton, under a salary from Goodyear, a part of which was paid by that company, or the parties who carried on the factory.
 Q. Goodyear was simply experimenting at that time?
 A. He was experimenting at different places; and they undertook there to make a regular business of manufacturing carriage cloths.
 Q. In 1839 you left the India rubber business entirely, did you not?
 A. I did.
 Q. And you continued out of the business how long?
 A. Between three and four years, as near as I can recollect.
 Q. Until 1844, did you not?
 A. Till 1844; perhaps a little in the winter of 1843 and '44.
 Q. Did you, after quitting the rubber business, return to it till after Goodyear got his patent for vulcanizing rubber, which was June 16, 1844?
 A. I cannot say that I was in his employ under a salary; but I had been experimenting for him at Springfield about that time.
 Q. What year?
 A. That was in the winter of 1843-44.
 Q. In the experiments that Goodyear was making between 1839 and 1844, was he using the monster machine?
 A. He used it in 1837 and '38; at a later period he was using other machines.
 Q. From 1838 to 1844 was any body using it?

A. I could not state of my own knowledge.

Q. You don't know personally of any use of it from 1838 to 1844; now in 1844 you entered Goodyear's employment again?

A. I did.

Q. What compensation were you to get?

A. Perhaps I should not say that I went into his employment; I made a sort of an arrangement with him to establish a new branch of manufacture in Naugatuck.

Q. Well, from 1844 to the 23d of May, 1850, you knew that Goodyear was the owner of your original patent, did you not?

A. I had been so informed.

Q. When were you so informed?

A. Probably as early as 1844 or '45; I don't remember the date.

Q. Was it Goodyear that informed you of that fact?

A. He did.

Q. On the 23d of May, 1850, when this agreement in writing was made between you and Goodyear, did you know who were the licensees of Goodyear?

A. I knew only by report.

Q. What companies or individuals did you then know to be engaged in making India rubber goods by the vulcanizing process?

A. Do you wish me to give a list of them?

Q. I want you to state what companies you actually knew to be engaged in making goods after the vulcanizing process at that time.

A. The Naugatuck India Rubber Company; the Goodyear Shoe Company, at Naugatuck, I believe; the Glove Company, and the Newark Company.

Q. I will state the names of the Goodyear licensees, and you will state whether you knew that they were so engaged: the Newark India Rubber Company, L. Candee & Co., Ford & Co., the Hayward Rubber Company, the New Brunswick Rubber Company,—were these licensees on the 23d of May, 1850?

A. I had so heard.

Q. Did you know of the Union India Rubber Company's using that process?

A. Apparently so.

Q. The Goodyear Shoe Company?

A. The Goodyear Shoe Company.

Q. The New York Rubber Company?

A. I did not know that Company by name.

Q. The Boston Belting Company?

A. It was reported to be, I believe.

Q. Horace H. Day?

A. So I understood.

Q. The Metallic India Rubber Company?

A. I do not know what company that is.

Q. It had its factory in New York; I will remind you of it by asking if you didn't go there once to look at their machinery with Judson?

A. I went to a factory, with Judson, in New York, to look at some machinery.

Q. When?

A. I do not know whether I can fix the date.

Q. Was it before or after the 23d of May?

A. I cannot recollect the time.

Q. Can't you recollect the year?

A. I only say it is quite likely it was that year—1850.

Q. Before or after the 23d of May?

A. I cannot say.

Q. You remember that Goodyear's letters patent were re-issued in December, 1849?

A. So I heard.

Q. Now can you tell whether it was before or after that re-issue that you went with Judson to that factory?

- A. I cannot.
- Q. What machinery were they using at the place you visited?
- A. They were using what is called my machinery under my patent. I believe it must have been after the re-issue.
- Q. Were all these companies and individuals you have named, before the 23d of May, 1850, using what you call your machinery or process?
- A. I believe they were, all of them.
- Q. How long before the 23d of May, 1850, had they been using it?
- A. I cannot say how long.
- Q. Had they been using it at least three years before?
- A. I should say some of them had.
- Q. Which of them that you now remember?
- A. The Naugatuck Company or Goodyear Shoe Company.
- Q. Now, sir, did you know by report, statement, or in any other way, that before the 23d of May, 1850, each of the companies or individuals you named, were licensees of Charles Goodyear?
- A. I do not think I could state of my own knowledge.
- Mr. JENCKES. It is not competent for this witness to state in any way, whether they were licensees of Goodyear or not, as they are not mentioned in the agreement of May 23, 1850.
- After some argument upon this point, the Court allowed the evidence upon the question of fraud alone.
- Q. On the 5th of September, 1850, or 23d of May, 1850, which of the persons or companies you have named, did you understand to be licensees of Goodyear?
- A. I have named those that I had heard; I did not know.
- Mr. RICHARDSON said that the fact of who were licensees must be proved by the written licenses.
- Mr. BRADY said that fact was proved by one of the interrogatories in Mr. Hutchinson's deposition, which was not objected to.
- The Court ruled that that was sufficient.
- Exception taken by Mr. Richardson.
- Q. Were these companies that you named companies that you understood on the 23d of May and 5th of September, 1850, to be licensees of Mr. Goodyear?
- A. I can only say as I said before, that I had heard that they all were.
- Q. Did you hear so from Goodyear?
- A. I did not.
- Q. Did you hear that Mr. Day was a licensee of Goodyear?
- A. I cannot say that I did.
- Q. Didn't you hear from Goodyear that he was not?
- A. I do not remember of his saying that he was not.
- Q. Didn't you know in 1850, that Goodyear had suits pending against some persons claiming under Mr. Day for infringement?
- Mr. RICHARDSON. I object to that.
- The Court. I think you have pursued this far enough.
- Q. You don't know whether Mr. Day was a licensee or not?
- A. I did not say so, I believe.
- Q. What do you say?
- A. I say the same in relation to his not being a licensee that I do in relation to his being a licensee—I had heard that he had a license for making shirred goods.
- Q. How was it about the Boston Belting Company?
- A. I do not know as to a license; I may have heard that they had one. I think I had also heard that there had been some difficulty in relation to it—some dispute about it.
- Q. On the 5th of September, 1850, did you believe that they had or had not a license under Goodyear?
- A. I did not know that they had—I had no positive knowledge.
- Q. What was your belief on that subject?
- A. I can say that I had heard so.

Q. You will do me the favor when I ask about belief to answer about belief?

A. I thing I always had some doubt about it; I do not know that I can state that I had a belief in regard to it.

Q. You were examined on this subject in the city of New York, as to who you understood to be licensees, were you not?

A. I was examined in reference to that, I believe.

Q. Do you remember how you stated there as to whether Mr. Day and the Boston Belting Company were licensees, or not?

Objected to as immaterial, objection sustained.

Q. Did you have a conversation with Goodyear about his consent to the use of these licensees of your machinery or process, after 1844?

A. I made some inquiry of him in relation to the matter his licensees—

Objected to as not having been gone into upon the direct.

The COURT admitted the evidence, to show witness's understanding, in order to judge whether he was or was not imposed upon in making this contract.

Q. Tell us what Goodyear said to you upon this subject.

A. I was using my patented process, which he told me he had purchased at Roxbury, and I asked him if he intended to charge any separate or additional tariffs for the use of it. He said "No, I shall permit my licensees to use it freely." That is the substance.

Q. (By Mr. RICHARDSON.) When was that?

A. In 1844 or '5.

Q. Now, at any time before the expiration of the original patent did you ever give a license to any body to use your patent?

A. I did not.

Q. Did you ever commence a suit against any body?

A. I did not.

Q. Was any body in the world prohibited from using it up to 1850?

Mr. RICHARDSON. That is a strange question.

The COURT. He has answered that he never licensed any body, or knew any body to be prosecuted.

Q. No objection made to the use of it by any body?

A. There was talk about prosecuting Dr. Hartshorn, I believe.

Q. Between whom?

A. By Mr. Armstrong at Roxbury.

Q. With whom?

A. I heard him speak of it.

Q. Who was going to prosecute?

A. The Roxbury company, or that concern.

Q. But they never did?

A. Never to my knowledge.

Q. Do you know why they never did?

A. I do not.

Q. Did they take any steps for that purpose at all? Did they consult any lawyer?

A. I cannot say that they did to my own knowledge; I do not remember it.

Q. You have told us about a conversation with Mr. Hodgman & Ames at the time the extension was a subject of conference; did Goodyear propose to you to take an extension, or did you propose to him to take it?

A. I informed him that I contemplated getting my patent extended, and that I had had a conversation with other parties in relation to it.

Q. It was you that first spoke to Goodyear about it?

A. I did.

Q. Had you said any thing to Judson, or he to you before that, about the extension?

A. I had not.

Q. Had you spoken with any of the licensees of Goodyear about it, or had either of them spoken to you?

A. I had not, and they had not.

Q. Before that time, had you been in the employment of Ondoroonk & Letson at New Brunswick?

A. I had.

Q. How long?

A. Between two and three years.

Q. What was their business?

A. Making shoes.

Q. Vulcanized India rubber shoes?

A. Yes, sir.

Q. Did they use your machinery or process?

A. They did.

Q. During all that three years?

A. Not all the time.

Q. Most of it?

A. Most of the time.

Q. What portion of the time did they use it?

A. The first portion of the time.

Q. What year?

A. In 1847 some time.

Q. Did they abandon the use of your process, or continue it?

A. My process? I was thinking of the other process—the camphene process. They were using my process in the latter part of the time, and the camphene in the fore part of it.

Q. During what time did they use your process?

A. In 1848 and '49.

Q. Now, sir, when that paper of the 23d of May was executed at Union Place Hotel, New York, Goodyear was residing there, was he not?

A. He had his family staying there at the time.

Q. Did you know that he had resided there for some time before?

A. I cannot say that I did.

Q. Did he reside there for some time afterwards?

A. I think he did at some subsequent period—perhaps continued on—I do not remember distinctly.

Q. You were on friendly terms with him at that time?

A. I was.

Q. Also with Judson?

A. I was.

Q. How did it happen that Judson was present on that occasion? Was it by appointment or accident?

A. I do not know how it happened.

Q. Had any part of a paper been drawn to be executed between you and Goodyear before Judson came, and, as you say, drew a part which was copied by Goodyear's son?

A. There had not to my knowledge.

Q. After the exchange of these papers, you taking one part and Goodyear the other, when did you next see Goodyear?

A. I do not recollect how soon after.

Q. Did you see him before the 31st of August, 1850?

A. I did.

Q. Do you remember what month between May and August?

A. I do not. My impression is, that I saw him several times. I cannot fix the time of either.

Q. Did you see him in New York at any time while testimony was being taken in that extension?

A. I cannot remember of seeing him there during that time.

Q. What was the day of your interview with him in which he suggested your employing Judson & Staples?

A. That was at that time.

Q. On the 23d of May, or about?

A. On the 23d of May, or about that time. I believe the very day, or the next day.

Q. Did you see him the next day at the hotel?

A. I do not remember whether I staid there the next day or not.

Q. Did you know at that time that Judson & Staples were the attorneys and counsel for Goodyear and his licensees?

A. I had heard that they had been. I did not know as to that matter at the time. I did not know any thing more definite than that I had heard that they had been.

Q. Heard it from him?

A. I think from Goodyear.

Q. Did you know any thing about this fund that had been provided for the maintenance of the extension of Goodyear's patent-rights and interests?

A. I had heard something in relation to a fund being provided.

Q. For that purpose?

A. For that purpose.

Q. Did you know who was the treasurer of that fund?

A. I did not know. I had no knowledge.

Q. Jonathan Ackerman—who was he?

A. I had heard that he was treasurer.

Q. You knew him well?

A. I knew him very well.

Q. Did you know that that fund which was provided was to be disposed of by Judson & Staples, and that they had the control of it?

A. I did not know that; I knew nothing definitely upon that subject.

Q. Had you a general knowledge that that was the fact?

A. I think I might have heard so.

Q. Have you any doubt that you had heard so?

A. Perhaps Mr. Ackerman might have the disposal of it.

Q. In that conversation which you had with Goodyear on the 23d of May, 1850, when speaking of Judson & Staples didn't he tell you that they were counsel for himself and his licensees?

A. I do not recollect of his doing so.

Q. Do you recollect that he didn't? Will you say he didn't?

A. I should think that he did not.

Q. What did he say about them at that time?

A. I do not recollect of his saying any thing about them at that time.

Q. Did he tell you that before?

A. Yes, I had heard of it at an early time.

Q. When the application was drawn for the extension who prepared the draft of it?

A. It is my impression that I went to Mr. Staples' office to sign it. It was drawn by him I think; I cannot be positive who drew it.

Q. Do you recollect any thing about the date of it?

A. I have been informed as to the date of it.

Q. Who informed you?

A. I saw a copy of it.

Q. Who showed it?

A. I heard it read here in the court.

Q. Do you remember then what date it was?

A. The 23d of May, I think, 1850.

Q. Which was the day before the agreement between you and Goodyear. Now can you remember whether you went alone to the office of Mr. Staples, or whether somebody went with you at the time that application was drawn?

A. I believe Judson was present.

Q. Had you had any conversation with either Staples or Judson about what either of them would charge you for any services rendered in that proceeding?

A. I had not as to the amount.

Q. Any conversation of any kind as to whether they were to be paid for their services—at what rate or what they were to do particularly?

A. I applied to Judson to act as my attorney and to pay the expenses, and Staples had there asked me if I wished him to act as my attorney, and I told him I did.

Q. Is that all that was said?

A. That is the purport of what was said; I cannot repeat all the words perhaps.

Q. Then nothing was said about the amount or rate of their compensation?

A. There was nothing about that that I remember.

Q. What they were employed to do was to get the extension?

A. Yes, sir.

Q. Any thing else?

A. To take the necessary steps; in taking the testimony it was expected there would be opposition.

Q. The business was to aid you in obtaining the extension—that was all?

A. That was it.

Q. You have said that Goodyear had already agreed to pay the expenses?

A. He had.

Q. Mr. Judson agreed that he would accommodate you with the money; was that for you only or in behalf of Goodyear?

A. It was for me as I understood it.

Q. Then do you mean to say you had an agreement with both Goodyear and Judson on the part of each, that he would pay the expenses?

A. I had an agreement with Goodyear and he told me that he could not pay the expenses, and he thought Judson could accommodate me.

Q. He said Goodyear was poor, you have told us?

A. Yes, sir.

Q. And you knew the fact that he was poor?

A. I did.

Q. You also were unable to pay them?

A. I was.

Q. Was any thing said at that time when you asked Judson to advance the expenses by anybody as to what the amount would probably be?

A. There was not.

Q. Was any thing then said by Judson and you, or either of you, about how Judson was to get back these expenses, if he did advance them?

A. There was not.

Q. While that extension proceeding was going on how much time did you devote to the examination of witnesses in New York? How much time did Goodyear deduct out of your pay?

A. About three months; between two and three—I think about three. Not of the time during the extension but—

Q. In obtaining the extension?

A. About one month.

Q. Did you render any bill to anybody for your services in aiding to procure the extension?

A. I did not to my recollection.

Q. Did you ever make a demand upon Judson to be paid for your time in helping to procure the extension, in writing or verbally?

A. I do not recollect of ever doing so.

Q. Is your recollection of what you did in that respect so distinct that you can state that neither in writing nor by word of mouth you asked to be paid for your services in helping to procure the extension?

A. I do not think I can be positive about it.

Q. You did receive money as you told us from Judson or by his order when it was going on; what was that for?

A. I received money and appropriated a part to pay my expenses, and a part to pay the expenses of other persons.

Q. You knew Hiram Hutchinson at that time did you not?

A. I did.

Q. He was president of the Newark India Rubber Manufacturing Co.?

A. He was.

Q. You and he were on friendly terms at that time?

A. I believe so.

Q. Did he, to your knowledge, take part also in assisting to procure this extension?

A. I do not recollect of his doing any thing but giving his testimony.

Q. You recollect that you were present at the time that Hutchinson was examined?

A. I believe I was.

Q. Was he present when you were examined?

A. I do not remember whether he was or not.

Q. Did you converse with Hutchinson about the extension proceedings while it was going on?

A. I think probably I did.

Q. Do you recollect whether you did at Mr. Staples' office or Judson's office, or anywhere else?

A. I recollect talking with him a great many times.

Q. I mean about the extension and while the proceeding was going on?

A. I have no doubt I did talk to him about it.

Q. Do you recollect of any such conversation, so that you can tell us if I ask you about it, what it was?

A. I cannot call to mind what was said during the time.

Q. Did you ever tell Hutchinson any thing to the effect that that extension was to be for the benefit of Goodyear and his licensees?

A. I did not.

Q. Did you ever tell him any thing to the effect that Judson was acting in the matter for the benefit of Goodyear and his licensees?

A. I did not.

Q. Did you see Hutchinson at any time after the extension was obtained, and have a conversation with him upon that subject?

A. I did not to my recollection.

Q. Did you ever talk with Hutchinson, or did he ever speak to you upon the subject of making a conveyance, at any time, of the extension to Judson in trust for any parties?

A. I did not.

Q. That you recollect—that Hutchinson and you never spoke upon the subject?

A. Do you say before?

Q. Or just after the agreement of September 5th?

A. I think I had some conversation with him in relation to being paid the \$1500 a year; or with some parties; and it is my impression he may have been one of them. Mr. Candee—

Q. Mr. Candee was one of the parties?

A. I think both of them were present.

Q. What I ask you about is, whether within a week or so after the extension you had any conversation with Hutchinson in regard to the conveyance of that extension to Judson?

A. I did not.

Q. Within a month?

A. I do not remember of doing so within a month. This same conversation I just referred to—

Q. When did that occur?

A. That was after the 5th of September.

Q. I was not asking after that, but before the execution of the agreement of the 5th of September you never had any conversation with any of the licensees of Goodyear as to conveying the title to the extension to Judson in trust for any thing?

A. I did not; I do not recollect of seeing Hutchinson within that time.

Q. Had the subject of conveying the extension to Judson in trust ever been mentioned at all in your presence before the 5th of September, 1850?

- A. It had not.
- Q. Any such idea in any way communicated to you?
- A. I have no recollection of any thing of the sort.
- Q. Did you ever have a conversation with Hutchinson in Broadway about the time he was going to France?
- A. I remember meeting him in Broadway.
- Q. Do you remember having a conversation with him at that time?
- Mr. RICHARDSON. What was the date?
- Mr. BRADY. The 12th of November, 1853. I will put that in another connection with the case.
- Q. When that application for the extension was drawn, and you signed it, was it read over to you?
- A. I dare say it was.
- Q. (Handing him the paper). There is your name, sworn to before Mr. Martingale, commissioner of deeds, on the 22d of May, 1850; you swore to that?
- A. I did, undoubtedly.
- Q. Was it read over to you before you swore to it?
- A. Probably it was; I have no doubt about it.
- Q. Do you remember that it was read over to you, or that you read it?
- A. I cannot state positively.
- Q. You knew the contents of it at all events. Tell me what you meant by this? "That the present owners of said patent are willing and desirous that said patent should be extended, and, in that event, they ought to make your memorialist a further compensation for his ingenuity and labor in the premises." Who were the present owners of said patent that you referred to in that affidavit?
- A. The only owner that I knew any thing about was Mr. Goodyear.
- Q. But you swore that in the event of the extension, they (the owners) ought to make you a further compensation; who are "they"?
- A. I do not know what was meant by that word.
- Q. Didn't you know what they meant when you swore to it?
- A. I did not.
- Q. And you don't know now?
- A. I do not.
- Q. Did you believe when you swore that the owners of the patent were willing and desirous that the patent should be extended, and in that event they ought to make you a further compensation, that there was only one person who owned the patent?
- A. I did not know that there was any other person who claimed the ownership of it.
- Q. Did you expect any more than one person to make you compensation?
- A. If there were more, I should have expected it.
- Q. Did you, on the 22d of May, 1850, expect to have any compensation made to you by any one person in the world except Goodyear, if the patent were extended?
- A. I did not.
- Q. Then you cannot explain in any way whatever why you said "the present owners" are willing to do it; can you?
- A. There might have been other owners that I did not know any thing about; I didn't know any thing about that.
- Q. I want you to take that paper in your hand—I believe it has never been produced to you before—and I want you to state to the jury whether that language was not understood by you as meaning at the time you swore to it, Goodyear and his licensees?
- A. I never had any connection with the licensees in relation to it.
- Q. Didn't you understand by the words "present owners," and by the persons that you referred to who were to make you a further compensation in the event of your patent being extended, Goodyear and his licensees?
- A. I did not; I had nothing to do with these licensees about it.
- Q. I will see if I can refresh your recollection upon the subject. You testi-

fied in the extension proceeding; do you remember being asked this question on cross-examination by Horace H. Day? He cross-examined you, didn't he?

A. I believe he did.

Q. "Who else is to be interested in the benefits of this extension, if granted?"

A. Who else than whom?

Q. Than Goodyear. And again: "What allowance has Goodyear agreed to make you in case of the extension of your patent?" It began there, and then some answers were given.

Mr. RICHARDSON. Let us have this answer.

Mr. BRADY. No, sir, I won't.

Q. I ask you if you were asked by Mr. Day, "Who else (besides Goodyear) is to be interested in the patent?"

Mr. RICHARDSON. The original paper is here, and Mr. Chaffee is entitled to see it. We are willing it should all be put in; we want it put into the case.

Mr. BRADY. There is one thing you ought to know; that I will take nothing from you by way of instruction.

Mr. RICHARDSON. We will, of course, have the right to use as much of the affidavit as we choose.

The COURT. As to particular parts, I suppose, without going over the whole; I do not know that I will engage to hear the whole affidavit.

Q. (Handing witness the paper). There is the question; "Who else is to be interested in the benefits of this extension, if granted?" Was that question put to you by Mr. Day?

A. It was, undoubtedly.

Q. Did you answer, "No one through any agency of mine?"

A. Yes, sir.

Q. "Who is concerned with Mr. Goodyear in the business to which this alleged improvement would be applied?" Was that question asked? Do you remember that?

A. I do.

Q. Answer: "I do not know of any one unless it is the licensees."

A. That is the answer.

Q. "Do you know the object of Goodyear in getting it?" Do you remember that question?

A. I do.

Q. Here is a question that is put to you: "What knowledge have you about any consent of Charles Goodyear to the use of the alleged improvement since 1844?" Answer: "I have used it in business in which I was interested, to which he has never made any objection. I know of no objection being made to its use by any of his licensees wherever I have been employed." Question: "Is that all the knowledge you have touching that consent?" Answer: "I have an interest in knowing whether he intended to permit his licensees to use said improvement; and in answer to my question he said he should permit all his licensees to use it for the purposes for which they were licensed. That is all the knowledge I have on that point." Question: "What do you mean by licensees?" Answer: "I mean those persons who have obtained licenses of Goodyear to manufacture certain kinds of goods under his patents, and I do not mean licensees under his patents."

Mr. RICHARDSON. That is precisely as this witness has sworn here on the stand, and if this is read to him, to contradict him, it is improper; it is reiterating simply immaterial matter. It is very different when read together in its connection.

Q. Now, after these answers, are you able to recollect whom you referred to in your oath here, when you spoke about the present owners from whom you expected further compensation? If you can, explain it. I shall be happy to hear it.

A. I cannot give any different explanation from what I have done.

Q. Do you remember certain payments made to you, at the store in Broadway, by John Greacen, during the time that this extension proceeding was going on?

A. I remember receiving money there, at that place.

Q. Do you remember any sums which you received?

A. I do not.

Q. Do you remember receiving \$5 on the 23d of June, 1850, at his establishment?

A. I can only say that I have no doubt I received it; I don't remember distinctly the amounts or the dates.

Q. Did you know that Mr. Greacen was banker or treasurer of Judson?

A. I did not.

Q. Did you know that he was one of the licensees of Goodyear, or connected with them in any way?

A. I did not know as to that matter, except that he professed to be manufacturing India rubber goods, or have connection with the manufacture of goods.

Q. Vulcanized rubber?

A. Yes, sir.

Q. What was the name of the warehouse at which you received this money from Mr. Greacen?

A. I do not know as I can give the name and title of it.

Q. You know that Goodyear's name was on the title of the establishment?

A. I have forgotten; I do not know.

Q. Were you there often?

A. I was, often; it is a good while since I have been there.

Q. Do you remember being paid on the 27th of July, 1850, \$35, for five days attendance on the extension, taking testimony?

A. I presume it is so.

Q. That is seven dollars a day?

A. I presume I received that amount of money.

Q. That is the amount you received?

A. I do not know any thing about any seven dollars a day.

Q. Were you not paid in fact at that rate for lending your services in obtaining that extension?

A. That sum of money is seven dollars a day.

Q. Was not that it?—were you not paid always at seven dollars a day?

A. I do not think I was; I do not remember definitely.

Q. (Reads.) "Trust fund paid Chaffee attendance \$35 on extension of the patent, taking testimony." Do you remember being paid about the 16th of Aug., \$15?

A. I presume it may be so; I know nothing to the contrary.

Q. At another time \$25?

A. I do not recollect any thing to the contrary.

Q. When you received the moneys at that store, did you receive them from Mr. Greacen, and were they paid for any other purpose than on account of that extension?

A. I received them at his office, either directly from him or some one else.

Q. All on account of the extension and for no other purpose whatever?

A. I do not know of any other purpose; I do not recollect of any.

Q. Now I will ask you about the first conversation you had with Judson, in which he spoke of Goodyear's being too poor to pay the expenses, &c. You say you went on to Washington from N. York on Friday, and I think you said you had not been in N. York 24 hours. What day did you come from New Haven?

A. Probably Friday; I cannot distinctly recollect.

Q. You recollect you were not 24 hours in the city of N. York?

A. I was not.

Q. Had anybody asked you to come on, so that you might proceed to Washington?

A. My impression is, I was requested by Judson to go on; whether by appointment previous, or whether by request, I do not recollect.

Q. I want to make that as specific as you can possibly fix it. Do you recol-

lect that Judson ever spoke to you on the subject at all before you arrived at New York?

A. My impression now is that it is more likely to be Mr. Staples, I do not definitely recollect.

Q. When you came to N. York before you went to Washington, did you see Judson in the city of N. York at all?

A. I cannot state that I did positively.

Q. Do you remember where you stopped at that time in the city?

A. I don't think I put up at any house.

Q. You think you went right through?

A. I think I left N. York in the afternoon and arrived in Washington the next day; of that I am not quite certain.

Q. Are you not enabled by any circumstances whatever, to fix with certainty whether Judson went to Washington with you in the cars, and whether you talked with him on the way?

A. There is a circumstance that I usually connected with it, and that is that Judson at one time presented me with a car ticket at the Jersey ferry or the Philadelphia depot. I have no recollection of receiving it on any other occasion.

Q. So that it is your best impression and recollection that Judson and you went on together at that time?

A. That is the only circumstance that I could connect with it.

Q. Do you remember that he paid your fare through and expenses on the way?

A. I do not recollect of his paying any expenses on the way.

Q. At what hotel did you put up when you got to Washington?

A. I have forgotten the name; I think it was at Gadsby's; the National, doubtless.

Q. Can't you remember whether, when you arrived at Washington, you found Judson there, or whether he came on after you?

A. I cannot remember positively about that.

Q. Can you tell on what day Woodman came on?

A. Woodman arrived there on Sunday.

Q. Can you tell us whether the first conversation you had with Judson was in the hotel or in the cars, or where it was? I want to see if you have any recollection which enables you to fix the place of that conversation?

A. I believe it was in the hotel; it was somewhere in Washington.

Q. That was the first time Judson had ever conversed with you upon that subject of Goodyear's being unable to carry out his agreement?

A. It is.

Q. You stated yesterday, when you were examined on this subject, that Judson stated to you that Goodyear would not carry out his agreement, and you used these words: "including what he had agreed to give me for the extension." Did Judson use those words?

A. I cannot say that he did.

Q. You cannot say that he said that at all?

A. Not the precise words.

Q. Or any thing to that effect?

A. I so understood him to mean, and so believed him to mean.

Q. I ask if you can state that he said any thing about what you were to be paid for that extension; I should like to have your best recollection of his language. Do you remember having made an affidavit, in the case of Horace H. Day against the New England Car Spring Company, in the city of New York, on the 16th of January, 1854?

A. I made an affidavit.

Q. Do you remember having stated in that affidavit where it was when you had this first conversation with Judson?

A. I think I have somewhere stated that it was either on the way to Washington or at Washington.

Q. Did you state this: "While I was on my way to Washington, for the extension, Judson told me it was useless for me to think of carrying out the

contract with Goodyear, as he said Goodyear was poor, that he knew his circumstances, and that he could not and would not pay any thing; and he repeated the same thing to me after it was extended?"

A. I believe I made that affidavit.

Q. Does that enable you to remember now whether that conversation was on the way to Washington or at Washington?

A. My belief now is that it was at Washington.

Q. Do you remember having made an affidavit in this case of Horace H. Day against Isaac Hartshorn and others, in this court, on the 20th of August, 1858?

A. I made an affidavit, I believe.

Q. Do you remember stating in that affidavit, that you understood that Wm. Judson acted as your counsel in obtaining the extension; and while you were on the way to Washington, to attend the hearing of the application for the extension, Mr. Judson told you it was useless for you to think of carrying out the contract with Goodyear, as he said Goodyear was poor; that he knew his circumstances, and that he could not and would not pay any thing; and that he repeated the same thing to you when it was extended? Now, sir, has any circumstance occurred since you made both these affidavits to enable you to state that it was not on your way to Washington but after you got there?

A. There has nothing occurred.

Q. Is this your writing (handing him a book), "E. M. Chaffee, New Haven, Conn.?"

A. That is my writing.

Q. That is the book of the National Hotel, and the date is Saturday, August 24, 1850. You entered your name at the time you arrived?

A. I did, undoubtedly.

Q. You know Woodman's writing?

A. I do.

Q. That is it, is it?

A. It is.

Q. Monday, August 26, 1850?

A. It is.

Q. Do you remember that Woodman arrived there on that day?

The Court. You seem to spend a great deal of time.

Q. Do you know when Judson arrived?

A. I do.

Q. That is Friday, August 27, 1850. Now, sir, after you had that conversation with Judson, in which he spoke to you about the poverty of Goodyear, from that time till the 10th of September, or thereabouts, did you ever see Goodyear?

A. I saw him on the 6th of September, if I remember right.

Q. Did you write to Goodyear at all?

A. I think I did on the 9th of September.

Q. Before that, from the time the extension was obtained?

A. I do not recollect doing so.

Q. Did you send him a message by any body?

A. I do not recollect doing so.

Q. You went to Staples' house on Monday night, after your arrival in New York; had you seen Staples before that evening in New York?

A. I had not.

Q. Had Staples sent you a note, inviting you to come to his house, or was there an appointment made verbally?

A. There was a request by Mr. Judson.

Q. When Staples read over to you that draft of an agreement that he had written, did you make any other objection to it than you stated yesterday?

A. I objected to it that the terms were not equal to what I expected to get from Goodyear.

Q. What did Staples say on that subject?

A. I do not recollect whether he replied to it or not.

- Q. Did you have any discussion with him on that point?
- A. I do not recollect any discussion further than I related before.
- Q. Did you name any amount which you would like to have over and above the \$3,000?
- A. I did not.
- Q. Did either Staples or Judson suggest any amount?
- A. They did not.
- Q. Did you give Judson & Staples both to understand that you would not make any such agreement whatever?
- A. I did.
- Q. When did you next see Staples after that?
- A. I cannot recollect.
- Q. After you left New York and went to New Haven, did you go to inquire for Goodyear to his house?
- A. I did not.
- Q. Did you make any effort to find him?
- A. I did not.
- Q. Having refused to make that contract at Staples' house, which Staples & Judson, you say, wanted you to make, on the ground that you had bargained with Goodyear, and that you wanted to fulfil it, why didn't you go and see Goodyear, and offer to fulfil?
- A. He had left orders with my wife to go to Naugatuck soon after I returned; he had some work that he wanted to have done; but I arrived home sick, and was unable to go.
- Q. Is that the only reason?
- A. That is the only reason.
- Q. Was the intention fixed in your mind when you got back to New Haven, to carry out your bargain with Goodyear?
- A. It was my intention to do so when I went back.
- Q. Did you remain sick till the 5th of September?
- A. I was quite unwell all the time.
- Q. Not able to go?
- A. I was out.
- Q. Your health has not for some years been very good?
- A. It has not been very good.
- Q. Were you not in about your usual health at that time?
- A. No, I think I was not.
- Q. When Woodman came on for the purpose of settling this difficulty, and spent the day and night at your house, on the 5th of September, didn't it occur to you or Woodman that if you wanted to carry out your agreement with Goodyear it would be well to let Goodyear know it? When you were talking with Woodman about transferring the patent to Judson, and you knew, and Woodman knew, that you didn't want to do it, wasn't it mentioned that you might find Goodyear and get him to carry out his bargain?
- A. I presume I told Woodman that I was going home for that purpose.
- Q. For what purpose?
- A. To carry out my bargain with Goodyear; that was my object.
- Q. Then why didn't you and Woodman go and see Goodyear on the 4th or 5th of September?
- A. As I said before, I was sick. And I must explain, that the night I was at Staples' house, I was out in a heavy rain; I never knew it rain so hard in my life; I got wet thoroughly through, and took a bad cold, and was sick for several days afterwards.
- Q. Why didn't you write to Goodyear upon the subject, or have him written to?
- A. It was said that he would be back.
- Q. When?
- A. Expected back every day.
- Q. Did any person go from your house on either the 3d, 4th, or 5th of September, to inquire whether Goodyear was in New Haven and could be found, so that you could carry out your bargain with him?

- A. I think I inquired myself at his factory what time he was going to be back.
- Q. What day was that?
- A. That was the day before the 5th.
- Q. Was Woodman with you?
- A. I am not quite certain; I think he visited that factory with me.
- Q. When did they say Goodyear would be back?
- A. I learned that he was expected back every day.
- Q. Did you go again on the 5th or send?
- A. I did not.
- Q. You knew Judson was coming on?
- A. I did.
- Q. To try to get this contract?
- A. I was told so.
- Q. Didn't you see Judson on the morning of the 5th of September at the hotel? Just recollect about that.
- A. I do not distinctly recollect; my best impressions are that I did not see him.
- Q. You were examined on that subject in New York; do you remember saying that you saw Judson at the hotel on the morning of the 5th of Sept., that you had some conversation with him there, and it was agreed that he would be up at your house in the evening, and when he came to your house in the evening, you had not yet made up your mind to make that contract?
- A. I believe I so stated.
- Q. Now do you recollect that you did see him in the morning?
- A. I cannot say positively; I have had some doubts about that since; my belief is that I saw him somewhere, to the best of my recollection.
- Q. Are you sure you saw him at your house?
- A. Yes, I am quite sure.
- Q. How far was Goodyear's residence from yours in New Haven?
- A. Nearly half a mile.
- Q. It didn't occur to you that if you were not well, Woodman might go and see Goodyear and tell him about it, or go to his house and tell them something about it?
- A. I cannot say what did occur to me.
- Q. You don't remember that that did?
- A. I didn't send him there at any rate.
- Q. Now did he want you to carry out your bargain with Goodyear, or not to do it?—what was he trying to effect?
- A. He thought the proposition of Judson's might be better for me than the proposition of Goodyear's.
- Q. He stuck to that and maintained that ground—that it was better for you to make the bargain with Judson?
- A. That was his opinion.
- Q. Do you remember when you and Woodman were talking about it that you told Woodman "I want to carry out my bargain with Goodyear," and Woodman said, "Don't let Goodyear know any thing about it," or any thing of that kind?
- A. I do not.
- Q. Did Woodman advise you to see Goodyear and let him know about it, or not to do it? Did he advise you either way upon the subject?
- A. I do not think he advised me either way.
- Q. When Judson entered your house with Candee, on the evening of the 5th of September, had you made up your mind that you would make that contract or would not?
- A. I had not made up my mind.
- Q. Was your mind still fixed on the idea that you would carry out your bargain with Goodyear?
- A. It was my choice to do so; that was my first choice.
- Q. And the agreement that prevailed and induced you not to do that was, if I understood you correctly, Judson's assurance that that instrument was to be

merely a security to him for the expenses of the extension, and that the "fee" of the extension was to remain in you?

A. No, I did not say so.

Q. What then was the prevailing and controlling reason with you?

A. Judson's threats to make me trouble was one of the most prominent things.

Q. Now, sir, Woodman says you told him that Judson said that if you didn't sign that paper he would break you up in your business; that he could do it, and would do it; did Judson say any such thing as that to you?

A. Not exactly in those terms.

Q. Did he say any thing like it?

A. As I said before, he threatened that if I didn't do it, I should take the consequences.

Q. Did he say to you any thing at all like what I now repeat, either at Staples' house or any where else—that if you didn't sign that paper he would break you up in your business; that he could do it, and would do it?

A. He didn't use such language to me.

Q. Nor any thing like it? Did you ever tell Woodman that he did?

Mr. RICHARDSON. I would like to know if Woodman said, in the first place, that Chaffee told him so.

Mr. BRADY. He said that Judson told him that one of the threats was that he would break him up in his business.

Mr. RICHARDSON. Didn't the court rule that we could not ask Woodman what Chaffee told him?

The COURT. I cannot, of course, remember what was said. I have a recollection that something of that sort was said by Woodman by himself. I noticed it because Chaffee was in no business in which he could be broken up. As having been said to him alone, I ruled it out; but I do remember something being said of that sort.

Mr. BRADY. Your honor ruled that Mr. Woodman could say any thing that Chaffee said to him; and he said he told Judson what Chaffee told him had occurred at the house of Mr. Staples, and part of that was that Judson threatened Chaffee that if he didn't sign that paper he would break him up.

Mr. RICHARDSON. I understand that to be a conversation between Woodman and Judson, and not between Woodman and Chaffee.

Mr. BRADY. Then let it pass.

Q. Did Judson specify any kind of trouble he was going to make you?

A. He did not.

Q. Did he specify any consequences that would fall upon you?

A. He did not in terms.

Q. Did he say any thing more than you have said? I want to know the full measure of this threat.

A. I have before stated what he said as well as I can.

Q. Were you then in any way bound to Judson in any contract or agreement of any kind whatever?

A. I was not.

Q. Had he any claim or demand against you of any kind?

A. He made a claim against me.

Q. Had he any before that paper was executed?

A. He so stated.

Q. What was that?

A. The expenses of the extension.

Q. Four thousand dollars?

A. Whatever it was.

Q. You said that he stated it would be about \$4,000?

A. As much as that.

Q. The idea in your mind was that it was to be about \$4,000?

A. That was what was said.

Q. If I understood you, Judson was to pay you, and the licensees of Good-year were to pay you \$1,200; this was your bargain with Judson—that Judson might be secured about \$4,000 for the expenses of the extension?

Objected to by Mr. Richardson as improper—as giving a construction to the papers.

Mr. BRADY. Not a construction of the papers—you say (to witness) that the paper was a mere security for the expenses?

The COURT. I do not know that he has said that that was the sole object of the instrument.

Q. Then I will ask—What did Judson say on that subject? Didn't he say that that was to be a security to him for the payment of the expenses of the extension?

A. I understood it would be a security.

Q. What did he say?

A. As I stated before; that he wanted some security for the expenses of the extension, and wanted that paper for the purpose.

Q. Did he tell you that that paper was to be a security to him for the expenses of the extension?

A. That paper was represented to be a paper by which he would be secured for the expenses of the extension.

Q. Did he state to you that it was to have any further effect beside that?

A. The effect was to secure himself so as to get his pay for the expenses of the extension, and by getting these expenses from the Goodyear licensees.

Q. What?

A. The expenses of the extension.

Q. Is that what he said?

A. I do not know that he used that language precisely.

Q. What I want to know is this: Whether, when that paper was signed, Judson said that he would hold you responsible for the expenses, and that was a reason why he wished you to execute the instrument?

A. That was a reason.

Q. Now when you had signed that paper, and had taken your counterpart of it, and separated on the night of the 5th of September, was it your understanding of the agreement, and was it an understanding which Judson gave you, that it was to operate only as a security for his expenses, to be paid by the licensees.

Mr. RICHARDSON. I object to that; it is asking what the Court ruled out upon one side—the effect upon his mind, and how he understood that paper.

Mr. BRADY said that Mr. Chaffee was called to the stand to convince the jury that he was deceived; that he parted with his title to his patent, when he was led to suppose he was simply giving a security, and he wanted to show whether that was the fact or not. He intended presently to show that there was no representation of any fact with which Chaffee was not as well acquainted as Judson. The only pretence of fraud put forward was, that Chaffee was deceived by Judson's representation as to what would be the legal effect of the instrument. If Chaffee believed that it was only to operate as security, then he was not deceived at all.

Mr. RICHARDSON replied that the plaintiff did not prove the state of Chaffee's belief in relation to his position relative to these several parties, at the time of this transaction, but in relation to Chaffee's position alone—what he supposed he was to receive from Goodyear. What Chaffee said, or what Judson said was competent evidence, but not their construction of the paper, or how they understood it.

The COURT. I am of opinion that Chaffee has no right of course, to construe that paper. It is before us, and we are to construe it for ourselves. As to what he intended to give or not to give, that is another matter. I think you can only examine as to facts—as to what was said by Judson at the time—what was understood from Judson—what his representations were that were made at the time; and then I must judge of that by taking the paper, to see whether there was any imposition or not.

Q. I want to see as to what occurred; we have misunderstood what you said yesterday. (Mr. Brady here read from the minutes of yesterday's examination, what the witnesses said in relation to what was represented to be the

legal effect of the paper, and what was said about the recitals not being true.) That you said yesterday?

The COURT. That is, he stated generally, not particularly.

Mr. RICHARDSON. I read the recital to the witness and he made that reply.

Mr. BRADY. Your Honor's recollection is very distinct that he said to Judson that the recitals were not true, and that Judson said it was no matter what they were. We think it is of some consequence whether they were true or not.

Q. Now, sir, when you were examined in New York did you state this in relation to what occurred at Staples' house, upon being asked to state what objection you had to making that agreement; "My objections were, that I had already an agreement with Goodyear in relation to that transfer to him; that I expected he would meet the expenses; and I wanted time to see him for that purpose?" And on being asked if you had other objections, did you answer, "I believe not?"

A. That is my testimony there.

Q. And here?

A. I do not undertake to state every thing that was said.

Q. That is the same objection you made in New Haven?

A. The substance.

Q. You stated that it was a part of that conversation in New Haven that Judson said in regard to the \$1,500 that he would have to see the licensees?

A. About the \$300 additional; yes, sir.

Q. Was any reason assigned by any body in that conversation why the licensees of Goodyear should be applied to to pay any thing towards getting his security for his expenses?

A. Mr. Judson referred me to Mr. Candee. He said he expected to get these moneys from the licensees, and he said that Candee in the mean time would furnish me with what money I wanted.

Q. What money did he expect to get from the licensees?

A. The \$1,500.

Q. How were they to be interested in the matter so as to induce them to advance any money?

A. That was a proposition of his, to get his pay in that way, by licensing them according to the terms of that instrument.

Q. You knew Candee was one of the licensees?

A. As I said before, I only knew from hearsay; I had no definite knowledge as to it.

Q. Didn't he state that he was a licensee, and came there in that capacity; or wasn't that said by somebody?

A. I suppose he was one.

Q. Did he state that he was, or did Judson?

A. I do not remember that he stated he was.

Q. Did Candee say he would confer with the other licensees, or see them about it?

A. I do not recollect of his stating so.

Q. Did Candee say that the licensees would make up the difference between \$1,200 and 1,500 in consideration that they were to be licensed under that paper? Was any such thing as that said by Candee or any body else?

A. I think Judson was the only one who spoke any thing about that.

Q. What did Judson say on that subject?

A. He spoke of seeing the licensees after his return to New York in relation to it.

Q. What I want to find out is, did any body in that conversation explain how the licensees were going to get any benefit for paying the difference between \$1,200 and \$1,500?

A. Be benefited for that in the same way that they were for the \$1,200 a year.

Q. What was said on that subject, if any thing, by any body? Of course they wanted to get something for the money; what was it?

A. Judson said that they would, or he expected they would.

Q. What?

A. Pay their portion of the expenses, and take licenses under that power of attorney.

Q. Take licenses from whom?

A. From me.

Q. From you?

A. He said my name would be necessary in any licenses.

Q. Did he say it would be necessary to take a license from you besides?

A. In connection with that.

Q. Did he say that in connection with Mr. Candee?

A. I do not know.

Q. Was Candee within hearing so that he could hear it?

A. He was in the room.

Q. Was there any difference between you and Judson, or amongst any of you, as to the terms of this paper, except what related to the putting in of this \$1,500 instead of \$1,200, and giving you this personal privilege to use.

A. Please repeat the question.

Q. I want to know whether the only two points that formed the subject of discussion and bargain that night, were not these: In the first place, that the \$1,200 was to be made \$1,500, and that in order to make it \$1,500, the other licensees were to be seen that they might agree to it? Was not that it?

A. That is what Judson proposed.

Q. And that was agreed to that night?

A. I made no agreement in relation to it.

Q. What did you say to that?

A. To his seeing them?

Q. Yes, sir.

A. I don't remember what my reply was.

Q. That was one point then; and the other was, that you wanted to have reserved the right to use the invention, and that was put in at your request. What other alteration was it then and there said should be made in that paper afterwards at any time?

A. Some alterations in relation to my interest reverting to my heirs.

Q. Was that said at that time?

A. It was proposed by me that it ought to be so.

Q. What was the answer to that?

A. Mr. Judson said he was willing that it should be so.

Q. That after your death it should revert in that way, or during your life, as you understood it? How was it stated?

A. I understood it to be during my life.

Q. How is that? Was there any thing said about your death in connection with that reversion?

A. Something was said in the paper in relation to it.

Q. I do not mean in the paper—outside of it?

A. I do not recollect of any thing being said outside of the paper about my death, unless I mentioned it in connection with reverting to my heirs in case of my death.

Q. Was it said that in case of your death this was to revert to your heirs?

A. It was so said in the paper.

Q. Out of the paper?

A. It was not said out of the paper.

Q. Was any thing said out of the paper about your assigns?

A. I think that was my proposition to him.

Q. In the proposition you made to him you didn't say any thing about heirs, but simply about assigns?

A. Heirs and assigns after my death; my heirs after my death. No, not assigns; I didn't say any thing about assigns.

Q. Was not the clause—"It is further understood that said Chaffee may reserve to himself the right to use said India rubber machinery in any business which he may hereafter carry on"—put in because you said you wanted it put in, inasmuch as it was in the agreement of the 23d of May, 1850?

A. I had it put in because I saw that Judson would have a right to veto the use of it, as I thought, by me, without I paid my proportion of the expenses.

Q. And didn't you also insist that because it was in the agreement of the 23d of May it should also be in the agreement of the 5th of September?

A. Not because, that I recollect.

Q. Was it mentioned at all by anybody in that conversation that there was such a clause in the agreement of the 23d of May, 1850?

A. I do not remember.

Q. Now sir, when Goodyear came in that night after you had got through that transaction, and he asked whether you had been successful in obtaining the extension and was answered that you had, was one word more said, by Goodyear or anybody else in reference to that extension, than that?

A. That was all; nothing in relation to our doings that evening. There were other things said, doubtless, I do not remember what.

Q. How long did Goodyear remain?

A. Not but a few minutes.

Q. During the few minutes he talked with you, didn't he?

A. I do not know that he did directly; I do not know but he did.

Q. Did he talk to Woodman?

A. My impression is there was a general conversation amongst us all.

Q. Did he talk to Candee or he to him?

A. I cannot specify which in particular.

Q. Was Candee present?

A. Candee was present.

Q. There was a removal of the writing materials, &c. out of the room; who took out the inkstand and pen? Do you remember?

A. I believe I removed them.

Q. So that Goodyear might not see that it had been used?—wasn't that it?

A. That was the object—not to have them seen there.

Q. Judson suggested removing all the things and you carried off the pen and ink, and somebody else carried other things, to remove every trace of it, and then Goodyear went away without any idea that such a thing had been done; and the next day you saw Goodyear; did you tell him any thing about it?

A. I did not.

Q. (Handing him a letter.) Is that letter your writing—the ink and pencil?

A. That is my writing.

Mr. BRADY read the letter from Chaffee to Candee, endorsed by Candee on the 6th of September, 1850.

Q. (Handing him another letter.) Is that your writing?

A. It is.

Mr. BRADY read the letter, from Chaffee to Judson, dated December 10th, 1850. He then asked the counsel on the other side to give him Judson's reply to the same. The counsel were only able to find a copy which they offered, but which was not received.

Q. Your expenses while at Washington were all paid by Judson, were they not?

A. They were principally.

Q. Do you remember that \$76 and some cents, or some such amount was paid?

A. I believe it was.

Q. I want to ask you in regard to that seal business. When you were examined yesterday you said in regard to the seal on that paper that you did not remember to have seen it there when you signed it, and according to your best recollection it was not there?

A. I did not see it there.

Q. You were examined on that subject also in New York, were you not?

A. I was.

Q. I will ask you whether your statement about that seal in New York was not this: They produced to you, you remember, two papers—the counterpart and one paper, and asked if you saw any difference in those papers, and you answered, "I see that one has a seal and the other has not." Then you were

asked if you remarked that at the time they were executed, and you answered "I did not." Was that your testimony in New York?

A. It was.

Q. Now sir, I want you to fix the date, if you can, exactly, at which you first saw Goodyear after the 5th of September, and talked with him, when he said you knew how little dependence could be placed on Judson, and talked about the rascally Judson.

A. That was within a few days after the letter of the 9th of September.

Q. When he expressed his dissatisfaction in the language you have uttered, did he not ask you still to carry out that bargain with him?

A. He did not.

Q. Did you suggest to him that you could do it notwithstanding this agreement of September 5th?

A. I believe I did not.

Q. Did you tell Judson you would give him that paper as a mere security?

A. I did; I told him that was my understanding in relation to it.

Q. Did you tell him that Judson told you the fee was still in you?

A. I did not.

Q. Did it occur to you that if the fee was still in you you could carry out that agreement with Goodyear? Did any thing on that subject occur to you at all?

A. It did not at that time.

Q. Nothing was said at that time?

A. Nothing was said in relation to it.

Q. You confided in all that Judson told you about the legal effect of that paper?

A. I presumed that he told me correctly about it.

Q. Did you believe what he told you implicitly in relation to the effect of it?

A. I did, I believe.

Q. Then you believed that what you called the "fee" was in you; why didn't you offer to give it to Goodyear?

A. I cannot state why I did not.

Q. Now will you state to the jury any statement which Judson made to you either at Staples' house or in New Haven of any fact which you now say was untrue?

A. I do not know that I said the facts were untrue.

Q. There was not any, was there?

A. Any untrue facts?

Q. Yes, stated by him there?

A. I do not know that there were.

Q. It is said that you were deceived; what is the point on which you were deceived?

(Objected to as improper.)

The Court. The question might be put, "Were you deceived?"

Q. Were you deceived?

A. I do not know that I can say that I was.

Q. Were you misled in any way; and, if so, how?

A. I was misled to do what I then thought I ought not to do.

Q. What was that?

A. To make an arrangement with Judson instead of making the one I had with Goodyear.

Q. Is there any other point or particular in which you were misled, deceived, or cheated; if so, tell it to the jury?

A. I thought then I was not getting what I had reason to expect I might get, or what I had always expected to get from Goodyear, in some shape or other.

Q. You mean to say you thought you were not getting enough?

A. Yes, sir; not as much.

Q. Why didn't you ask more?

A. I believe I did.

Q. Then that was a subject of bargain, wasn't it?

A. So far as the advance of \$1,500 was concerned; I stated that I wanted more bonus.

Q. That was agreed upon at last, and Woodman thought it was judicious to agree to it, didn't he?

A. I believe he did.

Q. Now is there any fact mentioned in this paper of the 5th of September which is not true? You have stated that you told Judson, when he read this paper, that the recitals in it were not true; shew me in what respect the recitals are not true?

(Objected to.)

Mr. BRADY. Your Honor understands that I offer it in relation to the matter of fraud, and if it be inadmissible in that respect your Honor can say so.

The COURT. I do not think that it is inadmissible, considering what he stated on the direct examination.

WITNESS. Shall I read what I think is untrue?

Mr. BRADY. Yes, sir.

WITNESS (reads). "And whereas said Charles Goodyear agreed with me for himself, and others using my said patent under him, that they would be at the expense of applying for said extension of said patent, and make me an allowance for the use thereof, in case the same should be extended, at and after the rate of \$1,200 per annum." I did not know in relation to that any thing about it; I believed it to be untrue; I did not know it to be true.

Q. You didn't know whether it was true or not that the licensees of Goodyear had made that arrangement to pay \$1,200?

The COURT. That is not it; he says he did not know that Goodyear agreed with him.

A. Goodyear made no such agreement with me in relation to his licensees or in relation to \$1,200.

Q. Did you know any thing about what relation there was—

Mr. RICHARDSON. Let him go on and state what recitals are untrue.

Q. Well, go on.

A. (Reading from the place where he left off.) "To commence on the 31st of August, 1850, payable quarterly; that is to say, \$300 on the first day of December, March, June, and September, in each and every year during the present or any further extension of the patent, and during any re-issue of the same, and until said or any re-issue thereof shall be set aside as void in the highest court to which the same can be carried." I did not know any thing in relation to that; it was untrue, as I believed.

Q. Did you know any thing about that so far as the licensees were concerned, what arrangements they had made?

(Objected to.)

Q. When the \$1,200 was first named, who named it?

A. Mr. Woodman, I believe.

Q. He particularly named it?

A. He was the first to name it to me.

Q. Did he name that after there had been some discussion as to how much there should be paid?

A. He named it after going to see Judson in New York.

Q. That is, named it to you when he came on from New York?

A. When he saw me at the hotel, before I left New York.

Q. After you were discharged from the employment of Goodyear, you then had no other business?

A. I had none, except experimenting, which I did for myself.

Q. When did you return to Goodyear's employment?

A. Some time in November, 1850.

Q. And then remained with him how long?

A. I remained with him till the spring of 1851, I think.

Q. Do you remember what month?

A. April or May, if I remember.

Q. In the period between your being discharged by Goodyear and the time when you actually returned to his employment were you occasionally employed by him?

A. I was employed to complete some things that were left unfinished.

Q. Now, sir, in regard to those receipts which you were shown yesterday, in the first place you think the receipt of September 19, 1850, is in Candee's handwriting; where was it written?

A. I can only say that any transaction in relation to this matter with Mr. Candee must have been at Judson's office.

Q. Have you any recollection about that receipt, where it was written?

A. My belief is that it was written at Judson's office.

Q. Do you remember that Judson was there at the time?

A. My belief is that he was there about that time; but whether at the precise moment I do not know.

Q. If your belief precludes recollection very well; but do you recollect that Judson ever saw that paper up to the time you signed it?

A. I do not recollect that he saw it.

Q. Do you say you signed it without reading it at all?

A. I dare say I read it.

Q. Did you make any objection to it?

A. I do not recollect of doing so.

Q. Well, sir, how is it about that one dated the 7th of October? That was written at New Haven, was it not?

A. It was.

Q. Was Judson present at that time?

A. I have no recollection of his being present at that time.

Q. Did you read that before you signed it?

A. I have no doubt I did.

Q. Make any objection to it?

A. I do not recollect doing so.

Q. Here are some more receipts of yours. In the first place, there is an indorsement of yours; that is your writing?

A. That is my writing.

Mr. BRADY here produced a number of receipts and drafts with witness's signature to them, which witness duly identified, and they were offered in evidence.

The drafts and receipts were dated variously from September, 1850, to September, 1852.

There was a receipt of \$250, which Mr. B. said he would produce hereafter, which was not connected directly with these payments.

Q. Between the 5th of September, 1850, and the 12th of November, 1851, did you see Judson very frequently?

A. I saw him several times.

Q. Did you request him to make the alterations which had been mentioned, in the agreement of the 5th of September?

A. I went there for the purpose of getting a paper, securing me the payment of the additional \$300.

Q. Did you go frequently?

A. I was frequently in New York, and frequently spoke to him upon the subject.

Q. Did you ask that any other change should be made in the agreement than that \$1,500 should be inserted instead of \$1,200?

A. I believe I did not.

Q. You mentioned yesterday the name of Benjamin H. Jarvis, a witness in this case?

A. Yes, sir.

Q. Did Judson agree that he would make these alterations in that paper in the city of New York?

A. He did not agree that he would, as I recollect.

Q. Didn't you state in the presence of Jarvis, to Judson, what alterations you wanted to have made in that paper of November?

A. No; that paper was written out as it stood, and shown to me before I saw Jarvis.

Q. Didn't you express to Jarvis or Judson what you wanted?

A. I did express to Judson what I wanted.

Q. Before that paper was executed, did Judson tell you for what purpose he wanted it?

A. He told me that he hadn't obtained the expenses from the licensees, which are mentioned in the other agreement, or which it was understood they were to pay in case they took licensees.

Q. Did he say that was the case in regard to all the licensees, or only in regard to a part of them?

A. I do not remember that he defined it.

Q. Do you remember that he said any such thing as that all the licensees had refused to pay their tariffs or contributions?

A. I understood him to say that none of them had.

Q. Wasn't it this way? He said that there were some licensees who were refractory and would not pay their proportion of the tariffs, and he wanted this paper for the purpose of compelling them to do it?

A. I never heard him say so.

Q. Did he explain to you that that part of the agreement which related to the licensees would not in any way affect you?

A. I do not think he did; I do not remember that he did.

Q. Mr. BRADY read the recital in the paper of the 12th of November, about the "omission to state, &c.," and the enacting clause, "Now, it is agreed, &c." Now, the question I ask you is this: Did Judson explain to you the purpose of the provision I have just read, and say to you that that part of the agreement would not in any way affect you, but was only applicable to licensees who would not pay?

A. He did not say any thing about its affecting me.

Q. Did you say to him that you had no interest in that part of it, or any thing of that kind?

A. I did not.

Q. Did you say that you thought you had an interest in that part of the contract?

A. I felt as if it was necessary that something should be done to induce them to pay up.

Q. Did you say to Judson that you wanted that provision to be in the paper, or did you object to it?

A. I think I did not make much objection to it.

Q. Did you make any objection?

A. I do not recollect that I made any.

Q. Did you notify Goodyear that there was going to be a change in that agreement in any way by word or writing?

A. I don't remember of doing so.

Q. Did you consider at the time that Goodyear had any interest in it at all? (Objected to as improper.)

The Court. That is constructive, of course.

Q. Did you know that Judson yet continued to be the agent of Goodyear?

A. I did not.

Q. Didn't you know at that time that he was the agent of Goodyear?

A. I did not.

Q. Didn't you know in any part of November, 1851, that Judson was the agent of Goodyear?

A. I cannot say that I knew it.

Q. Up to that time was there any quarrel or controversy between you and Judson, or misunderstanding?

A. No misunderstanding that I knew of; I do not recollect of any.

Q. Were you on particularly good terms with him?

- A. There were no difficulties between us that I recollect of.
- Q. It seems Goodyear told you in 1850; that you knew how little dependence could be placed upon Judson, and that that rascal was always coming between him and his bargains; had you lost all confidence in Judson at that time—the 12th of November?
- A. I do not think I had, entirely.
- Q. Had Goodyear said any thing more to you at that time?
- A. He had said something at earlier dates, but not after that.
- Q. What were your relations with Goodyear in November, 1851, as to whether Goodyear had confidence in Judson or not?
- A. I do not know as to his confidence in him at that time.
- Q. Had you any knowledge at that time (November, 1851), whether Goodyear had become satisfied with the agreement of the 5th of September, and had agreed to it?
- A. I had not, as to his satisfaction, in regard to it.
- Q. Had you had no intercourse with Goodyear about that agreement of September, 1850, between the time when he spoke of Judson unfavorably, and November, 1851?
- A. I might have had, but I cannot call to mind any thing.
- Q. And you didn't know in November, 1851, whether Goodyear accepted the agreement of September 5th or not?
- A. I suppose he could not do any other way.
- Q. But what he had done you did not know?
- A. I did not.
- Q. Had Goodyear, to your knowledge, any interest in that agreement at that time?
- A. I do not know what his interests were.
- Q. (Handing him a letter.) Is that your letter?
- A. That is mine.
- Mr. BRADY read the letter dated Providence, Nov. 8, 1851, from Chaffee to Goodyear, as follows:
- "Our business has crowded so hard that I have not yet done any more work for you, being short of help; but as soon as Mr. Bourn returns, it is my intention to do more for you. I am going to-morrow night to New York at Mr. Judson's request to have my papers corrected, but since there is no lack of confidence in your agent, on the part of yourself, your licensees or my own, it is doubtless not necessary to give this notice."
- Q. Does that refresh your recollection about giving Goodyear notice that that agreement was going to be altered?
- A. It appears that I did.
- Q. What did you give him that notice for?
- A. I have forgotten what my objects were.
- Q. Can you recollect any reason in the world why you gave him that notice, if he had no interest?
- A. I cannot.
- Q. Is what is said in that letter true—that there was no lack of confidence in the agent of Goodyear?
- Mr. RICHARDSON. I object; they put in a letter to contradict him, and then ask him if it is true.
- Mr. BRADY. I ask whether that statement is really true.
- The COURT. The letter is not under oath.
- WITNESS. I intended to write as I understood it.
- Q. Is that part of it true?
- A. There was at that time apparently no lack of confidence, doubtless, or else I should not have written it.
- Q. But you speak of the confidence of three people—of Goodyear, the licensers, and yourself—that none of you had any want of confidence in Judson; is not that it?
- A. That is it.
- Q. Is that the fact?

A. I do not know.

Q. Is it the fact that it is so stated?

A. That is the fact; it is so stated.

Q. Was it true?

A. It was true, as I understood it.

Q. (Handing him a letter.) Is this a letter to you of June 28, 1852?

A. That is my letter.

Mr. RICHARDSON having read the letter, said that it contained a queer, one-sided issue, which was immaterial and inadmissible; but he had no objection to going into it.

Mr. BRADY. I will not offer it now, but hereafter.

Q. Did you ever make a license to any body to use your machines?

(Objected to; question allowed.)

A. I did not.

Q. Did you ever ask any body in your life to take a license under you?

A. I do not recollect doing so. I should qualify it by saying that in regard to whether I gave any license, I do not mean to exclude my partners in business, Bourn & Brown.

Q. Did you give them licenses, or did they come in under your right and privilege?

A. Under my right and privilege.

Q. They had no license then except that, if that be one?

A. That is all.

Q. Did Dr. Hartshorn at any time ever apply to you for a license?

Mr. RICHARDSON. Since the extension?

Mr. BRADY. O no; I am going to prove a conversation with him as to the construction of this agreement and the rights of the licensees.

Q. Did you have a conversation with Dr. Hartshorn before the extension about that agreement with Goodyear?

A. I don't recollect what, if any.

Q. Did you have such a conversation?

A. I cannot undertake to say positively whether I did or not.

Q. Did he apply to you to obtain any interest in the extension when obtained?

A. I cannot recollect of his doing so.

Q. Can you recollect any thing about his having ever made such an application to you?

A. I cannot; I have no distinct recollection of any thing of the kind.

Q. Do you remember that he wanted to get an interest in the extension for you, and you told him that you had parted with all your right and title to it, and could not make any arrangement with him whatever, or any thing to that effect?

A. Before the extension?

Q. Yes, sir.

A. I do not remember of doing so.

Q. Do you remember being asked this in New York? "Before the time the extension was granted, did not Dr. Hartshorn apply to you to grant him a license under the extended term?"

A. I was asked that question.

Q. And your answer was—"He applied to buy the whole extension?"

A. That is the answer I gave.

Q. Then this question—"Did you inform him, in reply, that you could not, because you had already agreed to transfer your patent to Goodyear, and only had a right to use it in your own business?" And didn't you say in answer to that question "I believe I did?"

A. It was asked me undoubtedly.

Q. And you answered—"I believe I did?"

A. I believe so.

Q. With that exception, did you ever have a conversation with any body about taking any license from you either before or after the extension?

A. I never did.

Q. About that license that was granted to the New England Car Spring Company, state when it was that you first heard of it. Do you know Fowler M. Ray?

A. I do.

Q. Were you ever present in Mr. Ray's establishment when that license was read over?

A. I have no recollection of being present.

Q. Do you recollect any paper between Judson and the New England Car Spring Company ever being produced in your presence?

A. I do not.

The COURT. I feel a great deal of trouble about going on trial with another case. I know we have allowed papers to go in, but how they are material in this case I cannot see. Surely if Mr. Judson had no right to grant a license to the New England Car Spring Company (that is a question that is on trial there, and it is not for us to try here), of course the license is good for nothing, and if the Car Spring Company paid \$20,000, they have a right to recover it from Judson. If he had a right to grant such a license, then he would have a right to grant it upon the payment of a sufficient consideration. Whether they were licensees or not, or claimed under the original licensees, is not a question for us to decide here at the same time.

Mr. RICHARDSON said that he expected to show to the Court authorities which were perfectly clear, that where an attorney does acts which are not in compliance with the terms of his power, that furnished a sufficient reason for revocation. And upon that point he expected to address the Court at the proper time.

The COURT. I don't see how it is going to affect the case. If that is the view with which you put it in, I receive it; but I regret that we have got to try another case.

Mr. BRADY. As the gentleman is examined on the other side, we have a right to inquire about the matter.

The COURT. Of course.

Q. I was asking you whether there ever was a paper produced in your presence, purporting to be between Judson and the New England Car Spring Company?

A. Not to my recollection.

Q. Do you remember in the trial in New York that Mr. Ray was examined?

A. I do.

Q. You know that this subject of the license to the N. England Car Spring Co. was drawn to your attention?

A. It was, I believe.

Q. Were you ever with Judson in the establishment of Mr. Ray, in Nov., 1851, when that license was granted, or about that time?

A. I might have been; I believe I related an instance of being there present.

Q. Do you remember being called to the desk there, and having a paper shown you?

A. I do not.

Q. Do you remember any paper ever being read in your presence in Ray's establishment, when Judson was present, relating to the New England Car Spring Co.?

A. I do not.

Q. When you did hear that such a paper had been made, and that the nominal consideration in it was \$20,000, did you apply to any body to get a share of the \$20,000?

A. I did not.

Q. Have you ever made any such demand upon any body?

A. I have not.

Q. Did you inform Goodyear about it?

A. I believe I inquired of him in relation to it.

Q. How was it?—by letter or otherwise?

A. If any way, by letter.

Q. Did you know where Goodyear was at that time?

A. He may have been in England at that time.

Q. Did you keep a correspondence with him all the time he was in England?

A. I did.

Q. Do you know when he went there?

A. He went there in the summer of 1852, I believe.

Q. And is there yet, so far as you know?

A. He is.

Q. Your correspondence was a friendly one all that time?

A. It was.

Q. When you heard that the New England Car Spring Co. had given, as was said, \$20,000 for a license, and addressed a letter to Goodyear about it, was it that you knew that he had any interest in the matter?

Mr. RICHARDSON. I think they should let us have that letter.

Mr. BRADY. I will; there it is (handing it to witness).

WITNESS. That is my letter.

Mr. BRADY read the letter from Chaffee to Goodyear—no date, but filed Dec. 14, 1852. The letter was long, and related to business matters and experiments.

Q. When was it that Judeon first withheld from you the payment of any quarterly instalments due under your contract?

A. The first of Dec., 1852.

Q. Did you see him about that soon after he so withheld it?

A. I did.

Q. Where?

A. In the city of N. York.

Q. Was that the interview you stated about yesterday, in which he said he was sorry he had paid so much?

A. Yes, sir.

Q. What reason did he assign for expressing his regret that he had paid so much?

A. The reason was that he had not been paid the expenses as he had expected by the licensees.

Q. Did he make an arrangement with you, by which you and he both agreed that he should withhold your payments for a time, for any purpose?

A. He did not.

Q. There was no arrangement or understanding of that kind for any purpose whatever?

A. None at all.

Q. Did he give you to understand, in that interview, that he did not mean to pay any more?

A. He did.

Q. Fix the date of that as accurately as you can.

A. It was in the early part of Jan., 1853.

Q. Did you ever see him after that time about the matter?

A. I have forgotten whether I did or not.

Q. Did you correspond with him after the time you say he gave you to understand that he would not pay you?

A. My impression is that I did write afterwards.

Q. Was it in relation to these payments that had been withheld?

A. I have forgotten what it was in relation to; I should think some other matters perhaps.

Q. Look at that letter and say if it is your writing (handing him a letter).

A. I wrote this letter.

Q. Look at this letter also, and that letter (handing him two letters). This

is dated Jan. 28, 1858; was that after the time when Judson gave you to understand that he would pay no more money?

A. I cannot be positive in relation to it; it was, I believe.

Mr. BRADY read the letter of Feb. (blank) 1853, from Chaffee to Judson, and then asked the counsel for the plaintiff for the answer to it, dated June 28, 1853, which was produced:

Q. You say this is your letter, the answer to the other?

A. It is my letter.

Mr. BRADY read the letter.

Q. Before this transfer to Mr. Day, of July 1, 1853, was any tender made to you by any body of the arrears of instalments due you on this contract?

A. I received nothing from any one.

Q. I ask if any offer to pay you was made before the transfer to Day, the 1st of July?

Mr. RICHARDSON. The gentleman must not lead the witness.

Q. Was there at any time in the month of July, an offer to pay you any money?

Mr. RICHARDSON. I object to that. Any tender after the revocation is immaterial. It may be taken *de bene*.

Q. I ask you if at any time in July, 1853, an offer was made to pay you all that was due under your contract?

A. Mr. Pitman told me he had money for me, but I do not recollect what specific purpose he said it was for.

Q. When was it?

A. I cannot say whether it was before the first contract with Mr. Day or after. I should say it was after, or after the revocation at least.

Q. Can you tell as matter of recollection when, in point of fact, that transaction between you and Day was closed? Was it actually closed up before the 6th of July, 1853?

A. Transactions took place in regard to it about that time.

Q. Was it closed entirely between you and Day before the 6th of July, 1853?

A. It was so; my first contract closed it if he performed his engagements.

Q. Certainly, but the actual transfer of payment and the money and completion of the bargain—when was that actually finished up?

A. The payment of the money, I believe, was made on the date of that paper; I do not remember the date.

Q. Did it close the whole bargain and transaction between you and Day about the transfer of this patent?

A. It did.

Q. Did nothing remain to be done between you after that?

A. There did not.

Q. Have you any means of fixing with any certainty whatever whether that was not the 6th of July that the payment was made and the bargain closed?

A. It was a little earlier than that, I believe.

Q. Was it after the 4th?

A. It was after the 1st.

Q. After the 4th?

A. I should say it was about the 4th.

Q. When Mr. Pitman called upon you about that and offered the money, where did he see you?

A. He saw me in the street.

Q. Had you before that been addressed by Mr. Bradley? Had he sent you a letter offering to pay up the arrears?

A. I do not recollect what I did receive from him.

Mr. BRADY. Gentlemen, have you got that letter?

Mr. JENCKES. I have not.

Q. You did receive a letter from Mr. Bradley?

A. I might have done so; I do not recollect whether I did or not.

Q. Do you recollect that Mr. Pitman asked you to let him see the letter

written to you by Mr. Bradley in his absence, offering to pay the arrears on the assignment of the patent to Judson?

A. I do not recollect of his asking me that.

Q. Do you recollect saying to him, "I haven't it, it is in the hands of my lawyer"?

A. I do not recollect it.

Q. Do you say you don't?

A. I don't recollect; I have no definite recollection; my impression is that I have no recollection of his asking me such a question.

Q. Have you any recollection of such a letter?

A. I had not.

Q. Or of ever having handed such a letter to Mr. Richardson, or Mr. Jenckes, or any person for either of them?

A. I do not recollect doing so.

Q. Were you then asked to be shown a letter which Judson wrote to you in June to the same effect?

A. I should say not.

Q. Did you reply that you had placed all your letters and papers in the hands of your lawyer?

A. I do not recollect such a question being asked.

Q. Were you asked no question to this effect? Whether you had received a letter from Judson?

A. I do not recollect of any such conversation with Mr. Pitman.

Q. Do you remember saying this—"I prefer not to make any statement; I am directed by my lawyer to have no conversation on the subject"? This conversation I suppose to be a conversation at your house before you were met in the street.

A. I was so directed by my lawyers.

Q. Did you say so?

A. I might have done so; I do not recollect the conversation.

Q. Did you produce any letter?

A. I did not.

Q. Was there then an offer made to you to make payment of the balance of the annuity on account of Judson?

A. I don't remember on what account it was; Mr. Pitman told me he had money for me.

Q. What did you answer to that offer of money?

A. I objected to taking it.

Q. What reason did you assign?

A. I supposed it was a tender for some purpose and I objected on that ground.

Q. Didn't you object on the ground that you had no connection with Judson and could not receive the payment?

A. I might have done so.

Q. Were you then asked at what time that connection had ceased?

A. I should think not.

Q. Were you asked whether it had ceased before or after you received the offer of the payment of arrears from Judson?

A. I should think not.

Q. Did you say generally, "I will make no explanations"?

A. I think I may have said so.

Q. Do you remember its being said to you, "There can be no harm in stating whether your connection with Judson ceased before or after he sent you that letter"?

A. I do not.

Q. Then there was a subsequent meeting in the street and an offer made to pay you there, and you refused?

A. I should not think I saw him long enough to say a quarter of that.

Q. Was there an exhibition of money to you?

A. I did not see any.

Q. Was there an offer to exhibit it?

A. There was.

Q. And a request made to you to step into a place that the money might be exhibited?

A. There was.

Q. Did you refuse to do it?

A. I did.

Q. Were you told it was specie that was to be tendered to you?

A. I forget what was told about that.

Q. Look at that letter of January 5th, 1853; and say if that is yours (handing it to him).

A. That is my letter.

Mr. BRADY. Read the letter; also another dated December 6th, 1852.

Q. Is that a telegraphic message you sent to Judson (handing it to him).

A. It is.

Mr. BRADY read it, dated June 29th, 1853, as follows:

"To Wm. Judson: Mr. Day is here and will give me \$25,000 for my patent. You have the preference at the same price. Will delay closing if possible, waiting your answer by telegraph."

Q. There is a notice to the New England Car and Spring Co., signed by you (handing it to him)?

A. It is.

Q. Also a letter to Mr. Candee, dated August 25th, 1852 (handing it to him)?

A. It is.

Mr. BRADY read the notice to the New England Car and Spring Co. of revocation; also the letter from Chaffee, dated August 25, 1852.

Q. Whom do you refer to in that letter by licensees?

A. Mr. Candee and Hayward.

Q. Shoe associates?

A. Shoe associates.

Q. Look at that (handing him another letter).

A. It is not my handwriting.

Q. That is signed by one of your family?

A. It is.

Q. At the time that Judson, you say, had withheld the payment of your instalments, during any part of that time did you make any demand of that money on either of the licensees?

A. I don't remember doing so.

Q. Did you ever make any such demand of any licensee?

A. I don't remember doing so.

Q. Did you ever make any such demand of Goodyear?

A. I believe not.

Q. Did you ever give Goodyear any information that Judson was in arrear except what is contained in that letter of December that I have read?

A. I do not recollect of doing so.

Q. Did you ever give Goodyear in any way an opportunity, if he wished, to pay up that deficiency?

A. I notified Goodyear that it was not paid up.

Q. In that letter?

A. Yes, sir.

Q. In any other way?

A. I do not remember doing so in any other way.

Q. Does your corresponding with Goodyear continue up to this day?

A. I have not had any with him lately.

Q. When did it cease?

A. Some time in—

(Objected to as immaterial.)

Mr. BRADY said they would raise the legal question whether Chaffee did not know perfectly well, from the position of these parties, that even if Judson

Q. When that subject of the charge made against you was mentioned for the first time, it was in the letter which has been read here in evidence yesterday?

A. I think it was.

Adjourned.

TWENTY-FIRST DAY.

PROVIDENCE, *Saturday, Feb. 17, 1855.*

TESTIMONY OF CHAFFEE.

MR. CHAFFEE CROSS-EXAMINED BY MR. BRADY.—CONTINUED.

- Q. Did you write any letter to Staples in July or August, 1853?
- A. I believe I did.
- Q. Which month?
- A. I can hardly say whether it was July or August.
- Q. Was it before or after the payment of that money?
- A. Before.
- Q. Was it in answer to one he sent you?
- A. I think so.
- Q. Did you see Staples before that money was paid?
- A. I did.
- Q. Where?
- A. At the City Hotel, in Providence.
- Q. Was that the same day the money was paid?
- A. It was earlier.
- Q. Was it in the month of October, 1853, that you saw him in Providence, or in the month of August?
- A. It was later than August, I believe. I saw him at the City Hotel after he had been absent south some weeks. He was absent between the time of writing his first letter and the time of my interview with him.
- Q. Was any one with you at the time you saw Staples in Providence?
- A. There was not.
- Q. Did you meet him there by appointment, or by accident?
- A. By request from him, I think, to call and see him, stating that he was there at the City Hotel.
- Q. Do you know of your own knowledge about what business he came on here at that time?
- A. I knew from what letters he had written to me before only.
- Q. Had you sent a message to him in any way before that, inquiring whether his fees were paid for the extension proceeding?
- A. I believe I did, and inquired what the amount of his bill was.
- Q. Was that before he wrote you at all?
- A. I believe not; probably not.
- Q. I would like you, if you can from recollection, to be certain about that.
- A. I do not recollect doing so before.
- Q. Do you recollect well enough to say that it was not before he wrote you that you did send him that message?
- A. I believe it was not.
- Q. After you received the letter from Staples did you have a consultation with Day about paying that bill?
- A. I do not remember whether I did or not. I did with Mr. Jenckes, my lawyer.
- Q. Was Mr. Jenckes counsel for Day?
- A. I do not know whether he was or not.
- Q. Were you aware of the fact that Day had sent us a notice offering to pay all the costs of the extension proceeding, &c.?
- A. I did know that there was such a one served or proposed to be.

Q. Well, if Day was to pay all the expenses, didn't you confer with him before this payment was made?

A. I think quite likely I did.

Q. Did you?

A. I do not remember what the conference was; he knew that that was—

Q. The offer of Mr. Day is this (reads the notice of July 2, 1858.) Before that day had you and Mr. Day had any conversation about any claim of Staples?

A. We had not.

Q. You had afterwards?

A. We had afterwards, I believe.

Q. Who was it that suggested drawing this draft to pay Mr. Staples?

A. Mr. Jenckes, my lawyer.

Q. Was that when Staples was here in Providence?

A. It was afterwards.

Q. The draft was drawn on Bourn & Brown. You didn't mean, of course, E. M. Chaffee & Co.?

A. I think not; I have not seen it lately. I think it is drawn on Bourn & Brown.

Q. That was a separate firm from E. M. Chaffee & Co.?

A. Yes, sir.

Q. Had they any other funds in their hands at the time that draft was drawn?

A. Nothing further than my interest in business.

Q. Had you any interest in that firm?

A. All our financial affairs (the firm of E. M. Chaffee & Co.) were done in the name of Bourn & Brown.

Q. That draft being drawn, who took it to Staples in New York?

A. I believe I sent it by Mr. Day.

Q. Has Day repaid that money?

A. He has not.

Q. Has he agreed to do it?

A. He has not.

Q. He agreed beforehand that he would be at all the expense?

Mr. RICHARDSON. That is in the paper.

Q. He has not agreed to pay that?

Mr. RICHARDSON. Leave that to its own construction.

Q. At the interview of the 5th of Sept., did not Judson, before executing the papers, tell you in effect that he was interested with or for the shoe associates, and that they had interests of their own in the renewal, and that the arrangement he proposed was consequently the best to protect the interests of all parties interested in or working under Goodyear's patent?

A. I think he alleged something of that sort.

Q. Can you tell the jury what it was in substance?

A. He alleged that they had an interest in the Goodyear patent which would be protected by such an instrument as that.

Q. Do you recollect now that any other allusion or reference was then made to any other of Goodyear's licensees?

A. I do not now recollect.

Q. Did you not understand at that time that all persons who were carrying on the India rubber manufacture under Goodyear's patent, or by his consent or license, were using your patented improvement at that time (Sept. 5th, 1850)?

A. That all his licensees were?

Q. Yes, sir.

A. I did not know definitely as to that. I suppose I knew that the largest portion of them were—of those that were manufacturing vulcanized rubber.

Q. And they had no separate license for that?

A. I didn't know any thing about that.

Q. You didn't know of any separate license?

A. I did not.

Q. Was there any separate compensation for it, to your knowledge?

The COURT. He stated as to that.

Mr. BRADY. There was a difference of memory amongst us as to whether he had answered. My recollection was that he had said it was without any special license or compensation.

Mr. RICHARDSON. He didn't say that, but told a conversation with Goodyear on that subject in 1844.

Mr. BRADY. It will not take a moment; it is the last question on this point.

The COURT. I admit it as to the understanding from Goodyear in regard to the situation of his patent, but I think he has stated all about that.

Mr. BRADY. I do not wish to ask him twice.

Q. Had you any license from Goodyear to use your patent at any time?

A. No, I had not.

Q. Had you a license of any kind for any purpose?

A. Yes, I had a license to manufacture certain goods.

Q. (By Mr. RICHARDSON.) What kind of goods?

A. Japan cloths; I had permission from him to do so.

Q. Is that your writing? (handing him a paper).

A. That is my writing.

Mr. BRADY read part of the license to the witness, dated June 25, 1846, to use Goodyear's metallic gum mastic composition for coating cloths, for the purpose of marbleizing and japanning.

Q. Is that the license?

A. That was.

Q. Had you any other license from Goodyear at any time?

A. I do not know that I had—no written license.

Mr. RICHARDSON. I do not see what this license has to do with the case.

Mr. BRADY said it bore directly on the question of the value of Chaffee's patent. He proposed to show that Chaffee's patent was, in 1846, considered of comparatively if not absolutely of so little value that no mention was made of it in the licenses. He would not, however, take up the time to read it; the paper was in.

Q. I will read to you a passage from your letter of Jan. 28, 1858, to Judson. "I expect to leave here Saturday evening for New York; can I see you on Monday morning or in the interval." You wanted to see Judson on Monday; was that in regard to making payment of your annuity?

A. I stated that I could not recollect what that letter alluded to precisely.

Q. Can you remember any thing at all about what you wanted to see Judson for on that Monday?

A. I think it was for the payment of the money, and perhaps other matters.

Q. Do you remember what other matters?

A. I might say what I think it is likely to be.

Q. If you remember any thing about it state it. We do not want any guessing about it?

A. I believe it was in relation to some proposition—

Mr. RICHARDSON. You need not state unless you remember.

Mr. BRADY. If he does remember let him state.

Witness. I do not remember what else that letter refers to than the payment of money.

Q. I see that Haywood is mentioned in this letter. You say, "if Mr. Judson is absent will Mr. Jarvis please inform whether Mr. Haywood is in New York." Does that refresh your recollection about what you wanted to see Judson about?

A. That does not.

Q. Did you see Judson on that Monday?

A. I don't remember whether I did or not.

Q. Did you see him at any time in that month of January?

A. I believe I did not see him after that letter.

Q. Did you see him in the month of February?

A. I do not recollect whether I did or not.

Q. Did you have any interview with Judson on the subject of your annuity after the time in January, when he told you that he was sorry he had paid so much, and would not pay any more?

A. I cannot recollect of any.

Q. Here is a letter dated February, 1853, which was read yesterday, addressed to Judson. In that letter you speak of a proposition of Judson's that you wanted to put in writing; had he made any proposition to you?

A. He had.

Q. Was it in writing or verbal?

A. It was verbal.

Q. Then you must have seen him?

A. I saw him at an earlier date.

Q. Wasn't it between the time when he said he would not pay any more, and the writing of this letter?

A. I cannot be positive whether it was between or earlier.

Q. Was there any proposition pending between you and Judson about any thing at the time he told you he would not pay you any more?

A. I do not remember whether it was pending at the time or not. I can say this; that the proposition, whatever it was, was made at the time of taking some testimony at the Franklin buildings in New York. That is the best that I can fix the date; I do not know what time that was.

Q. Was that testimony in the matter of the Hayward extension?

A. I think it was.

Q. Don't you remember that the Hayward patent was issued in 1839?

A. That was about the date as near as I can remember.

Q. And it was before that patent expired that you had this conversation in New York with Judson?

A. I believe it was just before the patent expired.

Q. Now, sir, didn't Judson, between the month of January and June, explain to you why the payments of your annuity were withheld from you?

A. He sent me a letter which may be called an explanation; possibly.

Q. Which letter do you refer to?

A. I do not know what one it is or where it is.

Q. That is the letter, of the 23d of June, is it not?

A. I do not remember.

Q. It is the letter which I read yesterday, in which allusion is made to Bourn & Brown?

A. I do not remember it in that connection.

Q. Is that the letter? (letter handed to witness).

A. This is the letter.

Mr. BRADY read the letter, in which Mr. Judson says that Chaffee seems not to have appreciated the feelings which influenced him to withhold temporarily the quarterly payments, and that he very well knew it was to induce him to withdraw from Bourn & Brown.

Q. Had that been told you?

A. I had been requested to dissolve my connection with Bourn & Brown, and close up our business.

Q. By whom?

A. By Mr. Candee.

Q. By Judson?

A. I think I had, by Judson.

Q. Can't you be sure about that?

A. Undoubtedly I had been by Judson.

Q. When was that?

A. It was after the protest of the first of December.

Q. For the payment which he withheld?

A. Yes, and I believe after the first of January following.

Q. Where did he tell you that?—in Providence or New York?

A. This was in his own office.

Q. Wasn't that a part of the same conversation in which he said he would withhold the payments?

A. I believe it was at the same time—conversation at the same time.

Q. Didn't Judson tell you in that conversation that the shoe associates had insisted upon his prosecuting you, and Bourn & Brown, for infringing the Goodyear patent?

A. He did not.

Q. Did he say any thing of that kind to you in substance or meaning?

A. I think he said he should not regard Dr. Hartshorn's pertinacity in urging a prosecution.

Q. Prosecution for what?

A. For our making of India rubber shoes.

Q. According to the Goodyear patent?

A. According to our understanding of it.

Q. Was not Hartshorn there spoken of as one of the shoe associates?

(Objected to as incompetent proof.)

The Court. We ought to understand, of course, how Dr. Hartshorn was considered at the time.

Q. Did he mention Dr. Hartshorn as having any interest in this question?

A. I do not remember how or what his phraseology was.

Q. It related to India rubber shoes, didn't it?

A. I do not think it was defined what it was.

Q. Judson knew that was the business of Chaffee & Co.?

A. Yes, sir.

Q. Wasn't it mentioned that Hartshorn was one of the shoe associates, or connected with them, or any thing of that kind?

A. I do not think it was.

Q. Didn't you know that Hartshorn claimed, no matter whether rightfully or not, to have the same right as the shoe associates in the manufacture of India rubber shoes?

(Objected to as having no possible bearing.)

Q. You and Judson both knew that Hartshorn was engaged in the shoe business; was any thing more said about Hartshorn than that?

A. I do not think there was.

Q. Nothing more?

A. Nothing more.

Q. Didn't Judson tell you that others than Hartshorn had been equally pertinacious, and had insisted upon having you prosecuted for infringing Goodyear's patent?

A. I do not think he did.

Q. Didn't he tell you he could not resist doing so; that he was counsel and trustee, and had a fund in his possession for that purpose, and must do it,—or any thing to that effect?

A. I should say that he might have said something of that sort; I cannot recollect the words.

Q. Didn't he tell you he didn't want to sue you, but wanted you to withdraw, so that if he did bring a suit for infringement it would be against Bourn & Brown alone?

A. I think he alleged something of that sort.

Q. Did you agree that you would withdraw from Bourn & Brown?

A. I did not.

Q. Did you say any thing to that effect?

A. I told him I thought I could not; I did not see how it was possible.

Q. Didn't you say you would try?

A. I told him I would use my influence the best I could to do so, I think.

Q. And then, in January, a negotiation began between you and Judson with a view of your withdrawing from Bourn & Brown; is not that so?

A. I cannot state when it began; there was no negotiation further than he

pointed out some way in which he thought it could be done; he advised me to consult counsel in relation to it.

Q. Now I will ask you whether that letter of January and February didn't both refer to that subject?

A. It did.

Q. Did you give Judson to understand that you would, before you entered into that negotiation, consult a lawyer about it?

A. I did.

Q. Did you consult a lawyer about it?

A. I did not.

Q. Did you ever tell Judson you had consulted a lawyer about it?

A. I think I told him I would.

Q. Did you tell him you had?

A. I do not remember of telling him so.

Q. Did you write to him on the subject of having consulted a lawyer at any time?

A. I do not remember of doing so.

Q. There is a letter of January 5, 1853 (handing it to him), is that your letter?

A. That is my letter.

Mr. BRADY read the letter, in which Mr. Chaffee says that, in the mean time, he will consult a lawyer in Providence.

Q. That being written January 5, 1853, reminds you that that was a subject of negotiation as early as that date?

A. It does.

Q. Now, sir, did you ever inform Judson that that thing could be carried out?

A. I do not recollect whether I did or not.

Q. Did you ever make any answer to his letter of the 23d of June, which we have read, except your letter of the 27th of June, in which you say that you have laid all the matters relating to your patent, as well as the matters involved in the suit which Judson had brought against you, with your legal adviser? Is that the only answer you ever made to the letter of the 23d of June, in which Judson refers to the reasons why that payment was withheld?

A. I do not recollect any other.

Q. Either verbal or in writing?

A. I do not recollect.

Q. There was a suit brought against Bourn & Brown in Providence, was there not, for infringing that Goodyear patent?

A. I believe there were some notices served; I forget what they were.

Q. In April, 1853; was it not?

A. I cannot give the date.

Q. (Reads the record of the suit, filed April 30th, 1853.) You knew of that suit about the time it was commenced?

A. I did, undoubtedly.

Q. Now, between the 30th of April, 1853, and the 23d of June, 1853, was not that negotiation between you and Judson pending and continuing?

A. It was not.

Q. When did it break off?

A. It broke off in the winter some time.

Q. What! before this suit was commenced?

A. Yes, sir.

Q. When did you first inform Bourn & Brown that there was any such thing going on between you and Judson?

A. I do not remember what was the first time.

Q. What month was it?

A. I don't remember.

Q. Was it before or after the commencement of this suit that you first let your partners know any thing of this suit?

A. I think it was before that they knew of it.

- Q. How long before April?
- A. I don't remember; I cannot tell.
- Q. Was it in the month of April?
- A. I cannot tell whether it was or not.
- Q. Nor in March?
- A. I cannot.
- Q. There is no way of fixing that? Do you know that this bill was amended on the 4th of June, 1858, so as to make you a party?
- A. I believe it is so; I recollect the circumstance.
- Q. Wasn't the commencement of that suit against Bourn & Brown without you the result of a distinct understanding between you and Judson, that it should be so commenced that your name should be left off, and you should get out of that firm?
- A. It was not.
- Q. No such thing?
- A. I never had any such understanding.
- Q. Can you explain, then, how it was that you were not included in that suit when it was first commenced?
- A. I cannot explain it.
- Q. I want to ask you about the original letters patent with your extension indorsed upon it, that you had at your house on the 5th of September; the following day you delivered it to Judson at the depot, did you not?
- A. I did not.
- Q. When did you deliver it to him?
- A. On the same evening (the 5th of September), to the best of my recollection.
- Q. When you delivered it to him what was said about it?—what was it delivered for?
- A. I think he requested it for the purpose of examination.
- Q. I want your recollection as to what was said about it?
- A. I do not recollect any thing else about it.
- Q. Do you recollect any thing of that kind?
- A. I recollect his asking it for the purpose of examination.
- Q. Did he say for the purpose of examination?
- A. I think so.
- Q. Do you recollect that he did?
- A. He did.
- Q. Did you say so in New York?
- A. I do not know whether I said so or not.
- Q. Did you say in New York any thing other than that you delivered it to him?—that it was for any particular purpose?
- A. I do not remember.
- Q. Were you asked in New York this question? "Was there any conversation on the subject of your having back that patent?"
- A. I remember that question was asked.
- Q. Do you remember what your answer to it was?
- A. I do not.
- Q. Was it this? "I cannot now relate any conversation in regard to it."
- A. I presume I did.
- Q. Were you then asked this question? The first question is, whether you recollect any conversation upon the subject, and you answered "I do not now recollect of any."
- A. That is undoubtedly so.
- Q. In regard to the agreement of November 12, 1851, have you ever said that that was exactly the agreement that you intended to have made on the 5th of September, 1850?
- A. I do not think I have; I do not remember of saying so.
- Q. In substance or effect?
- A. I do not think I ever said any thing to any body in relation to it.
- Q. Did you ever, in any affidavit or paper, state that the agreement of No-

vember 12, expressed what you intended to agree to, on the 5th of September, 1850?

Mr. RICHARDSON. Suppose he did; he has not said any thing to the contrary now. They cannot contradict him upon such a subject.

Mr. BRADY. This is not a contradiction; it is confirmation, as I understand it.

The COURT. He says he don't remember of having said any such thing.

Q. Here is a certified copy of an affidavit which you made in the suit of Horace H. Day against L. Candee and others, on the 20th of September, 1853; do you remember having said this in that affidavit? (Reads a portion of the affidavit relating to what the affiant understood in regard to the legal effect of the papers.)

Objected to by Mr. Richardson as the opinion of the witness upon the construction of the papers.

The COURT. So I think and so I have ruled once before. You must look at the papers themselves.

Mr. BRADY. I want to show what Chaffee understood that contract to be, for the purpose of repelling fraud.

The COURT. They do not set up on the other side that Chaffee misunderstood the contract.

Mr. BRADY. Chaffee said that by his understanding of it there was no license to be given without his concurrence.

Mr. RICHARDSON. He said Judson told him so.

Mr. BRADY. I will ask him a question about that.

Q. Did you believe what you say Judson told you to be the legal effect of that paper of September 5th?

A. I thought there was some doubt as to all his obligations in regard to the matter.

Q. Which part of it did you believe?

A. I cannot now define at this time what I did believe or what I did not.

Q. Can you tell the jury what was your understanding of that paper, when Judson left you on the night of the 5th of September, as explained to you by Judson?—what you believed?

Objected to.

Mr. BRADY said he would stop at once if the counsel would say that Chaffee was not deceived or deluded by Judson.

The COURT. You can ask him, of course, whether he believed or not what Judson stated to him as to a particular point; but to get his construction of that instrument, I think, is improper.

Mr. BRADY. I admit that distinctly; it is not his business to construe that paper. Has your honor taken his last answer, that he cannot discriminate between what he did and what he did not believe of what Judson said?

Mr. RICHARDSON. He did not say so.

Q. Did you say on your cross-examination in this case, that you believed what Judson represented to you as to the legal effect of the paper of the 5th of September?

A. I believe I said so.

Q. Do you adhere to that now?

A. I do, in a qualified sense.

Q. State the qualification.

A. What was that question of yesterday?

Q. The question that you answered before was, that you believed what Judson represented to you about the legal effect of the paper of the 5th of September; you say that is true, and you adhere to it with a qualification; what is the qualification?

A. In relation to these recitals, I believed, or supposed, he was correct.

Q. You knew if the recitals were correct, perfectly; but he told you how the paper was to operate—that the fee was to remain in you, and there was to be no license given without your consent; did you believe all that?

A. I did.

Q. Now, I will ask you whether you have stated that the second paper, of November, 1851, was carefully drawn up by said Judson, and was precisely as you understood the first was to be, and as you did understand it, except the alteration of the sum to be paid annually from \$1,200. to \$1,500?

Mr. RICHARDSON objected to having a garbled portion of an affidavit put in. It was an argumentative affidavit, and if the gentleman wanted that, together with all the affidavits in the case in Conn., he would be glad to have them in. The gentleman should not ask this witness as to his belief, and then undertake to contradict him by saying that he undertook to put a different construction.

The COURT. There has been no evidence to impeach the agreement of the 12th Nov.; you don't undertake to impeach that as matter of fraud?

Mr. RICHARDSON. Not at all except as it becomes a part of the other in its legal effect.

Mr. BRADY. That will not do; I submit that the counsel who closes this cause to the jury is entitled, if the proofs will admit of it, to say to the jury that no attempt has been made to impeach the paper of Nov. 12th, on the ground of fraud.

The COURT. I have heard no evidence as to that matter, therefore I don't think you are called upon to support it. They may connect it with the other, that is to say, if the first falls the second would seem to fall with it. That is a part of the agreement.

Mr. BRADY desired to say further that if Chaffee, out of court, in an affidavit had said that the paper of Nov. 12, was precisely such a paper as he ought to have executed on the 5th of September, and that was admitted, it would relieve this case of an immense amount of insinuation, and suggestion, and argument, and proof on both sides, and it might bring the case down to this amongst other legal propositions to be presented to the court; whether the rights of the parties would not be substantially the same in that view, for all parties in this case.

The COURT. You have a right to presume that what that paper contains it was the intention of Chaffee, of course, that it should contain. As he signed it, and if it is not impeached, you can argue from its effect, from its having been given, that that must have been the contemplation of the parties in regard to the other paper. It is to supply the deficiencies contained in the paper of the 5th of Sept.—that is what is stated in the paper of the 12th of Nov.—and these deficiencies are pointed out. It presumes, of course, that there were no other deficiencies except what were pointed out.

After some further argument and conversation,

Mr. BRADLEY called his honor's attention to the fact that Chaffee had sworn that no person, not even Goodyear's licensees, could have a right to use, under the first paper, without Chaffee's name.

Mr. RICHARDSON. You will find that Judson told him that his name would be necessary.

Mr. BRADLEY. In any license?

The COURT. I understood the statement generally—that his name would be necessary to their license.

Mr. BRADLEY. I understood him also to use the expression, the Goodyear licensees.

Mr. BRADY then put in a letter, dated Naugatuck, July 18, 1850, written by Chaffee.

Q. This letter seems to have been written, and then the word "lawyers" was changed to the word "counsel." Did you make that alteration?

A. It does not look like my hand-writing.

Q. Is it your hand-writing?

A. It looks like my hand-writing sometimes.

Q. Do you remember making that alteration?

A. I do not.

Q. Don't you remember that you did?

A. I don't remember any thing about it.

Q. When did you first know Mr. Day in connection with this transfer of July 1, 1853?—the first time you saw him about that?

A. Some week or more previous.

Q. In Providence?

A. In Providence.

The counsel having here closed the cross-examination of Mr. Chaffee upon the title part of the case,

Mr. RICHARDSON wished, before they proceeded to cross-examine him upon the machinery, to re-examine him upon the question of title, and put in certain papers in connection therewith.

Direct resumed by Mr. Richardson.

Q. Did you ever see that paper before (handing him a paper)?

A. I have.

Q. When is it dated?

A. July 15, 1852.

Q. Is that a proposition to you by Mr. Candee in relation to your patent?

A. It is.

Q. Is that your hand-writing?

A. That is my copy: it is from the first draft in Candee's hand-writing.

Q. Did you have the first draft yourself or Mr. Candee?

A. Mr. Candee.

Q. Was that proposition in this paper made to you on the 15th of July, 1852?

A. It was.

Mr. RICHARDSON read the paper.

Q. State whether you received those two letters (handing him two letters)?

A. I did.

Mr. RICHARDSON read the letters, the first dated July 10, 1852, from Candee, and the second, Sept. 23, 1852, from Candee & Hayward.

Q. Look at that letter from Mr. Candee (handing him another letter). Did you receive that?

A. I did receive it.

Q. Look at these four from Dickerson & Candee (handing them to witness). Did you receive these?

A. I did.

Mr. RICHARDSON read the letter from Candee to Chaffee, dated June 19, 1852.

Q. Did you hold that paper (handing him a paper)?

A. I did.

Mr. RICHARDSON read the paper dated May 17, 1849, in which three of the shoe associates expressed their willingness to grant a license to Bourn & Brown.

Q. Is that a contract between you, Goodyear, and Bourn & Brown (handing him a paper)?

A. It is.

Mr. RICHARDSON read it and then offered to read two of the letters from Mr. Dickerson.

Mr. BRADY at first objected, but immediately withdrew his objection.

Mr. RICHARDSON then read one of the letters, dated August 18, 1852; also another from Mr. Candee to Mr. Chaffee, dated Nov. 16, 1853.

Q. Do you know about what time the action of Goodyear against Day took place in New Jersey?

A. I do not know definitely; early in October, if I remember, 1852; it was within a short time of Mr. Candee's revocation.

Q. Did you and Bourn and Brown go on and manufacture for Mr. Goodyear under this agreement with him?

A. We did.

Q. You have been inquired of in relation to a conversation in New York with Judson, in which some allusion was made to your leaving the business of Bourn & Brown; state whether you ever, at any time, consented to the non-payment of your salary or annuity.

A. I never did.

Q. When was the principal negotiation made about that?—before September, 1852, or after?

A. Before September, 1852.

Q. Did you ever receive any distinct offer to pay you any sum of money for Judson or Candee or Hayward—even to pay up your annuity—up to the 23d of June, 1853, after this letter declining that proposition?

A. I did not.

Q. You were cross-examined yesterday in relation to receiving some money from Judson; state the circumstances that took place in relation to the first money you received from him at the time of the extension—state what was said about the purpose for which it was given to you.

A. The first moneys that were paid to me were paid by Mr. Judson at his office; or he made arrangements with several parties present—I think Mr. Candee, Ford and Hutchinson.

Q. That is after the paper was made; I ask you in relation to some little sums that were paid to you during the application in Judson's store in Broadway. What were the circumstances of your receiving that money? How happened you to receive it from Judson?

A. I called upon him for moneys to pay the expenses of witnesses.

Q. Did you get money to pay your own travelling expenses?

A. I did.

Q. Was that received with the understanding that he was to advance you moneys as a payment for services?

A. That was understood by me as a part of the advances towards the payment of the expenses of the extension.

Q. Did you ever make any arrangement with Judson, or ever say any thing to him, or he to you, about seven dollars a day?

A. Never.

Q. Did you about any other sum to be paid you for your services in procuring that extension?

A. I did not.

Q. You were inquired of in relation to your having testified in an affidavit that you thought a certain conversation between you and Judson occurred in the cars, and then a book from the hotel at Washington was produced, showing that Judson arrived there before you did; had any thing occurred to you since you gave that deposition as to the place where the conversation was had, except your own reflections that induced you to alter your mind as to the place?

A. Nothing but my own reflections upon it.

Q. You were inquired of in relation to that license to the New England Car Spring Company; when you heard of that license what did you do?

Objected to.

Q. Was Judson a co-partner and largely interested in the New England Car Spring Company?

A. I was informed that he was.

Q. Did you go to their office and give them notice in relation to the matter?

A. I did.

Q. What did you tell them?

A. I told them that Judson was not authorized to make such a license.

Q. (By Mr. BRADY.) When was that?

A. It was within a month of my hearing that the license had been given—somewhere about the 20th of December; I cannot distinctly state.

Q. You said you sent that telegraph to Judson? (handing him a paper.)

A. I did.

Q. State whether at that time your goods had been seized in New York, and to what amount, under Judson's direction.

Objected to as irrelevant.

Mr. RICHARDSON said he only wanted to fix the date of the transaction and

amount of goods seized in connection with this claim that he was consenting to the withholding of the payments.

Q. What was the amount of these goods?

A. From \$13,000 to \$15,000.

Q. Goods that you had sold?

A. They were.

Objected to.

Mr. RICHARDSON said he only wanted to fix the fact that the goods were seized.

Q. Was the date of that seizure prior to the telegraph?

A. It was.

Q. Did Judson answer that telegraph at all?

A. He did not.

Q. Had you, prior to that time, had an application to sell your patent, and been negotiating for its sale?

A. I had.

Q. With other parties?

A. With other parties.

Q. Had you at any time consulted with Mr. Bradley about it?

A. I believe I did.

Q. When did you consult him?

A. I cannot fix the date when it was.

Q. Was it before that time?

A. Before.

A. A considerable time before?

A. I should say it was some months before.

Q. Was it after Judson notified you that he should not pay any more instalments?

A. It was.

Q. Was it before the other negotiation to sell it that you consulted Mr. Bradley?

A. Before this other negotiation previous to Mr. Day's?

Q. Yes, sir.

A. It was.

Q. You said yesterday that you signed a notice to be delivered to the Oak Spring Company; was that done at the request of Day, and under the direction of Mr. Jenckes?

A. Under the direction of Mr. Jenckes.

Q. Did you send any message to Mr. Staples or Mr. Day, prior to the time he called on you for the payment for his services, directly or indirectly?

A. My impression is that I had a letter from him prior.

Q. Before you had any letter, or heard that he made any claim on you, had you directly or indirectly sent to him about it?

A. I did not in relation to his services.

Q. Any thing upon the subject of his services?

A. I did not, to the best of my recollection.

Q. Was the conversation you had with Mr. Pitman, about which you were asked, before or after the notice of the revocation which was served upon Judson?

A. It was after.

Q. Was it after the morning of the second day of July?

A. It was some time between that and the final payment of the moneys by Mr. Day?

Q. Then it was after the making of the first paper with Mr. Day, and after the revocation, and before the making of the last paper and the payment of the money—before the final closing of it?

A. It was so.

Q. Before that time had any thing been said to you about paying you money, except what appears in this letter of the 23d of June from Judson?

A. I do not recollect of any thing else being said.

Q. Did you know of the formation of a company in the town of Malden, Mass., in the spring of 1858?

A. I knew there was a company formed there as early as that; but I cannot fix the date.

Mr. RICHARDSON said he wanted to ask this witness a question, to fix a matter of date, as original testimony.

Q. Did you know of the formation of the Malden Company?

A. I heard of it.

Q. When did you hear of it?

A. It is difficult for me to fix the date when I heard of it.

Q. Did you hear of it before you made this transaction with Mr. Day?

A. I did.

Q. You have been inquired of in relation to a conversation between yourself and Hiram Hutchinson; did you have a conversation with him at Judson's office on your way back from Washington to New Haven? Did you see him there at all?

A. I did not; I don't remember of seeing him there at all.

Q. Do you remember any conversation with him upon any subject?

A. I do not remember any at that time.

Q. After the extension of your patent, and before the 5th of September, did you see Hutchinson at all?

A. I did not.

Q. What was the amount in value of the goods under these contracts that you, (Chaffee & Co.) furnished Charles Goodyear?

A. Five or six thousand dollars.

Q. Has he ever paid you any thing on them?

A. He never has.

Q. Has he ever paid you any thing of the \$5,000 that he was to pay in case he should not get the license completed from the shoe associates?

A. He has not.

Q. A letter was shown you in which you stated to Goodyear that you hadn't got your pay from Judson; is this the reply to it (handing him a letter), and did you receive it?

A. I did.

Mr. BRADY objected to any of Goodyear's letters being given in evidence.

Mr. RICHARDSON said that Chaffee's letters to Goodyear had been put in, and he wished to put in the reply to show what Goodyear said about it.

The COURT ruled out the letter.

Re-cross-examined by Mr. Brady.

Q. The date of the contract with Goodyear seems to be March 27, 1851; didn't you know at that time that the whole right to manufacture boots and shoes under the Goodyear patent was in the shoe associates?

A. I had understood that it was not.

Q. Who told you so?

A. Mr. Goodyear.

Q. Did any body else?

A. I think not.

Q. Had you ever seen the agreement between Goodyear and the shoe associates, by which he gave them that exclusive right?

A. I had not.

Q. You didn't know of it at that time?

A. I hadn't seen the agreement.

Q. Didn't you know, on the 27th of March, that Goodyear had no right to give any license to any body?

The COURT. The subject of inquiry is simply in regard to whether he received the \$5,000 which Goodyear promised to pay if he didn't got the license for him.

Mr. BRADY said he understood the counsel to offer the evidence for the purpose of showing some want of faith on the part of Goodyear.

Mr. RICHARDSON. We have not attacked Goodyear's faith.

Q. How many pairs of shoes on an average have been made under that agreement since the 27th of March, 1858?

(Objected to as new matter.)

Mr. BRADY wanted to show that Bourn & Brown had made a much larger amount of money than Goodyear was ever bound to pay.

Mr. RICHARDSON hoped he would deduct from that amount the \$15,000 seized in New York.

The COURT ruled the question out of order.

Mr. BRADY then wanted his honor to exclude the testimony in regard to the \$5,000.

The COURT said it was already in, and he could not exclude it until he knew what use was to be made of it.

Mr. BRADY then moved to strike it out on the ground of irrelevancy.

After some argument by counsel

The COURT said: In regard to my own view, to be sure I think it is a matter of no importance whether Goodyear has paid the \$5,000 or not, as to any connection with this case, or whether he was liable to pay it. What use the gentleman may make of it when he comes to the jury, I do not know. I should not be disposed to strike it out unless it clearly appeared to me that it was not of any importance. It does not appear to have any connection with this negotiation about inducing Chaffee to withdraw from Bourn & Brown. I do not see how this license of Goodyear had any thing to do with that—how they are connected. Chaffee had a right to withdraw or not, just as he pleased. There may have been an inducement held out to him to withdraw, which he might have entertained for some time, and afterwards thought best not to follow. The jury have not got to decide upon that point—whether he ought to have withdrawn or not. This matter being in, therefore, I shall suffer it to remain. With regard to the other matter it strikes me I cannot go into it.

Mr. BRADY took exception to the ruling.

Q. Did you have a conversation with Hutchinson, or he with you, before he went to Europe, in which you complained to him that Judson did not pay your annuity?

(Objected to as not legitimate on cross-examination.)

Mr. BRADY wished to examine upon this point in reference to the affair of Bourn & Brown, which the other side had examined, introducing some papers.

The COURT could not see that they had examined into the details of that negotiation.

Mr. BRADY. They introduced the letters of Mr. Candee.

The COURT. That relates, of course, to investigations before the negotiations with Judson.

Mr. BRADY. It was continued all along to that time.

Mr. RICHARDSON. No, it was broken off.

Q. When was it broken off?

A. By Mr. Candee in September, I think.

Q. Never renewed?

A. It was not.

Q. Never resumed by any body whatsoever?

A. It was not.

Q. Did you say that the payments which Judson made you while the extension proceeding was going on were advances towards the extension?

A. I say they were moneys which he had agreed to furnish in procuring the extension.

Q. Moneys for what purpose?

A. For the purpose of paying the expenses of procuring the extension.

Q. They included compensation to you personally did they not?

A. I presume I appropriated the moneys to my own use—some of it.

Q. You were asked about your going to New York and giving the Car

Spring Co. notice that Judson had no right to give a license, and you said that was within a month after the date of the license, which was November 20th?

Mr. RICHARDSON. He said it was within a month after he got notice of its existence, December 20th, 1852.

Q. Are you not in error about that? Didn't you first hear of it in May, 1858?

A. From my recollection now I should say I did not.

Q. When you made your affidavit in New York, or in Providence, in May, 1858, you immediately took measures to procure a copy of it—

(Objected to as far as relates to what the witness swore in New York.

Mr. BRADY. The witness says he gave the notice in 1852; I want to show that it was in April, 1858.

The COURT. You have a right to show that.

Q. Did you state in New York that the time you first heard of it was in April or May, 1858, in Providence, Rhode Island, and that you then took measures to get a copy of it?

A. I believe I was under a mistake then; I now know that it was not so.

Q. Do you know that Judson went to Europe on the 4th of July, 1852, and remained there four months?

A. I had heard he was absent in Europe.

Q. During the time this negotiation was going on with Mr. Candee, the whole of it, wasn't Judson absent in Europe?

A. He was absent during a portion of it.

Q. During July, August, September, and October, 1852, wasn't he absent in Europe, and didn't he leave that negotiation in the hands of Candee & Hayward?

A. I do not know in whose hands he left.

Q. You didn't see him in the mean time?

A. I did not.

Mr. BRADY wished to offer some letters of Mr. Dickerson for the purpose of showing dates.

(Objected to and ruled out.)

Mr. BRADLEY called the attention of the Court to some inquiries that had been suspended until they could procure the reporter's minutes. He then proceeded to read question and answer as reported, from that part of the testimony of Chaffee relating to the conversation with Judson on the 5th of September, about the "fee" remaining in Chaffee, and Chaffee's name being necessary in any license. Mr. Bradley proposed to show that the witness's recollection with regard to what his understanding was at the time the contract of the 5th of September was made, had been contradicted by his recollection stated under oath more nearly to the time of September 5th than the present. He thought they were entitled to show that.

Mr. RICHARDSON said he was willing that the whole affidavit should be put in; but he submitted, that having put the question to the witness they were concluded upon that point. They were endeavoring to show that Chaffee at a subsequent time to the making of the contract put a construction upon it which would not correspond with what Judson said the construction was, and then they were going to show that Chaffee said he believed Judson at that time. Perhaps he might not have believed him when he made that affidavit, and had been better advised since and altered his mind. He was not swearing to a fact but to an opinion.

The COURT. I am of opinion that the statements cannot be considered as a contradiction. Chaffee swore to what was the meaning of the contract of 1851, and his simply saying that he was satisfied with that contract and that it was as he wished it in September, 1850, would not contradict this evidence.

Mr. BRADLEY took exception to the ruling.

And in regard to this matter Mr. Bradley wished to understand whether his Honor would not allow that question to be put because the witness gave a different construction from the Court. Would his honor assume that the witness would or would not give a different construction from that which his honor

would say was the proper construction? Was not that a question for the jury to pass upon?

The COURT. I do not think there is material enough to go to the jury. I think it ought to appear distinctly in order to furnish ground for contradiction—not that it may be so or may not be so. The jury are therefore left to guess as to that. It should appear distinctly in order to show an absolute contradiction.

Mr. BRADY. Suppose I say that a certain piece of writing was what I understood that contract to be; haven't we a right to put that paper before the jury?

The COURT. What I say is this; that you must, in connection with that, show what was the understanding of Chaffee at that time, in reference to the agreement of 1851. It must all be connected together.

Cross-examination upon the question of validity, by Mr. Bradley.

Q. What kind of calenders were known and used in the arts at the time of your alleged invention?

A. In what branch of business?

Q. In any?

A. Calenders were known in the dressing of cloth and paper, perhaps.

Q. What kind of calenders were known in those branches of business at that time?

A. Calenders consisting of alternately iron and paper rollers.

Q. What other calenders? Were there metal calenders known at that time?

A. I do not know.

Q. And you did not know whether there were any cylinders of iron, heated, revolving with an unequal motion at the time of your alleged invention?

A. I did not.

Q. You mean then to say, that the use of heated cylinders with a rolling and slipping action, was a novelty in machinery?

A. So far as I knew.

Q. Was the rolling and slipping action a novelty in machinery at that time?

A. It was, so far as I knew.

Q. And the use of heated cylinders made of iron was a novelty, so far as you knew?

A. Several in connection was a novelty.

Q. How many in connection were not a novelty?

A. So far as I knew there was no two in connection.

Q. What do you mean then by several in connection being a novelty? Were there more than two in connection, to your knowledge, known before?

A. I did not know of any two.

Q. Then what do you mean by saying several in connection?

A. I say several in connection was a novelty.

Q. Several, then, means two or more?

A. It does.

Q. Had you been engaged in any other rubber factory at that time?

A. I had not.

Q. Had you ever been a machinist in any other business where such machinery was used?

A. I had not.

Q. Where were the calenders that you used obtained, and how were they constructed?

A. I procured them constructed at South Boston.

Q. How were they constructed?

A. They consisted of three rollers, placed one above the other, the two-bottom rolls geared together.

Q. What material?

A. Cast iron.

Q. How revolving upon one another?

A. The two bottom ones revolved with an even motion, and the top one could be stopped or not at pleasure.

Q. Heated by steam?

A. Heated by steam.

Q. Did you make a model of your "monster?"

A. I caused one to be made.

Q. When did you have it made?

A. I had it made just previous to the application for the patent.

Q. A model for the monster?

A. A model for the patent.

Q. Did you ever make a model for the monster?

A. I made a model of it.

Q. When did you have it made?

A. Just previous to applying for the patent.

Q. When was that?

A. That was in the spring of 1886.

Q. Was that before or after the monster had been made?

A. After.

Q. How long had you been using it before you made your model?

A. Probably experimenting with it, not having quite completed it, for three months.

Q. It was completed before you made the model?

A. It was.

Q. Why didn't you make your model then and your drawings according to the monster, as you were using it?

A. I made it as near as was believed to be necessary by those skilled in making them and taking out patents.

Q. You had an apparatus for introducing steam into the machine you used?

A. I had.

Q. You had not in your model or drawings?

A. I had not.

Q. You had three rollers only in your monster, and you put in four in your model and drawings; why was that?

A. My original draft and order for that machine was for four rollers.

Q. But when you experimented for three months, and settled down with three rollers and made your model, why didn't you make it according to the machine you used, as regarded the rollers?

A. It was believed to exhibit as near as possible, the whole invention.

Q. Why then didn't you execute it so?

Q. (By the Court.) There was no model for that?

A. There was a model.

The Court. It is not produced here.

Q. Can you give any reason other than that—that it was necessary to have a model as near the invention as possible?

A. That was my design, and as near as was necessary.

Q. That is the reason why you left out the other roller, can you give any other reason?

A. The roller was left out because I didn't succeed in getting it made in season to put it in.

Q. If you have any reason to give, just give it.

A. What is the question?

Q. Why you left out that fourth roller on the model and drawings you made from the machine after you got the machine in operation?

A. I didn't leave it out.

Q. Is it shown in the drawings?

A. It is.

Q. The fourth roller?

A. Certainly.

Q. Why didn't you make it conform with your machine, which hadn't but three rollers?

A. Because I thought it exhibited the invention better than the three roller machine that I had.

Q. Better than the machine you found the best one to use?

A. I designed to add a fourth to the machine.

Q. Did you ever add that fourth to the machine?

A. I did not; it would have been done if the business had been prosecuted successfully.

Q. In regard to the putting the coloring matter in and mixing it between the rollers, is the common method now to drop it in between two rollers revolving towards one another?

A. It is.

Q. How is it in your machine, as represented by this model?

A. It goes between a roller revolving and some bars, which are a substitute for rollers.

Q. Then you don't mean that the coloring matter in this case goes between two rollers to be ground; but, on the contrary, it is ground between this large roller and these bars?

A. I do not say "on the contrary;" I think it is the same thing.

Q. How long were these bars to be?

A. They were about six feet,—the same length as the face of the rollers.

Q. What is their thickness?

A. About an inch and a half.

Q. When coloring matter is brought up against this large roller, I ask you if these bars will not spring and give more or less?

A. This is not an accurate model; there is an outside bar and brace here to stiffen it,—a very heavy and powerful one.

Q. That brace is here? (produces it.)

A. Each of these bars had a piece placed in between them, to keep them from pressing together.

Q. Did you specify something to put between them to keep them from pressing together?

A. I believe so.

Q. Will you refer to the model?

A. They were afterwards taken out, not being found to be necessary.

Q. When the rubber and coloring matter together was dropped through on to the cylinder—or the rubber—did it stop up those spaces or not?

A. It stopped up the spaces where they were not properly adjusted; but there were places where it went through in a proper manner.

Q. When you dropped your coloring matter on to these rollers, did the projecting parts of the rubber and coloring matter get caught between these bars and partially stop up these spaces?

A. It was not the case very often.

Q. How long did you continue to use these bars as a mode of putting your coloring matter into the rubber?

A. A few days; a week perhaps.

Q. No longer?

A. No longer.

Q. Now, if you began your experimenting, as you say, three months before the spring of 1836, and took out your model and drawings in August, 1836, why did you retain, as a part of your specification and model, this thing that you didn't use but two or three days or a week?

A. That was the last thing made; it was a very difficult thing to make; we hadn't machines to make it as perfect as could now be made.

Q. Was it made of wood?

A. Made of iron, filed off with great care; one man spent nearly all winter about it; it was the last thing put on the machine.

Q. When did you say your machine got into operation,—manufacturing?

A. Early in the winter of 1835 and '36.

Q. Why did you retain in your specification this thing, which you didn't continue to use?

A. I didn't take it out because I didn't use it, but because I had occasion to use the machinery for other purposes, and found that the lampblack would fly about the room, and discolor the goods we were coating; I ordered another small machine to be made as soon as possible.

Q. How long did you continue to use this apparatus?

A. I used it about a week—I always used a part of it—about a week for coloring, I mean to say; I always used one bar, and sometimes two or three.

Q. Where did you put that one bar?

A. This one (pointing to the inside bar towards the machinery.)

Q. What for? to assist in grinding and preparing? You didn't use this process for mixing in coloring matter?

A. I did not, after I got the machine made.

Q. Which way was the cylinder moving when the coloring matter struck the top of it?

A. It was moving that way (inward.)

Q. When the coloring matter lodged on the top of these bars, where would it be carried?

A. Not on top; it passes between and goes under the bars.

Q. It is dropped on the top of the cylinder through the bars, according to your model?

A. It is.

Q. And this cylinder is revolving inward?

A. It does.

Q. Now you say, as matter of opinion, that that apparatus for getting the coloring matter down here is just the same as taking it by hand, and having it crushed up between the cylinders?

A. I found it so by practice.

Q. With regard to this Hayward process; is that any thing else than wiping the rubber on to the cloth by having a cylinder moving fast with rubber upon it, and cloth moving slow upon a cylinder? Is that the Hayward process?

A. I do not consider it is wiping the rubber upon it.

Q. Is it not the fact that in the Hayward process the rubber is on the fast moving cylinder and the cloth on the slow?

A. I believe that is the meaning of the patent.

Q. Now, sir, you say you have specified the same process in your specification for this machinery, do you not?

A. I do not know that I have said so.

Mr. RICHARDSON. I don't think you have asked him.

The COURT. He said he could produce the same thing.

Mr. BRADLEY read from the minutes of the witness's previous testimony where he said, "he produced the same result precisely that is described in that specification."

Q. Now, sir, be kind enough to show whereabouts in your specification you can produce the same result?

Mr. RICHARDSON. Ask if it is described there, in the first place.

Mr. BRADLEY referred to the minutes again, where the witness had said that that process was described in his specification.

Q. Now, I ask you to refer to your specification, and say where the process is described?

A. Let me see the Hayward patent?

Q. I have not got it.

A. I say so, because the rubber comes in contact with the cloth between friction rollers; either way, whether the rubber is in contact with the slow or the fast roller, the cloth can be coated.

Q. I merely ask you to point out where it is specified in your specification?

While the witness was examining the specification, Mr. Bradley said he would give him till Monday to find it. Witness said he could answer it without this.

Adjourned.

TWENTY-SECOND DAY.

PROVIDENCE, Monday, Feb. 16, 1853.

**TESTIMONY OF CHAFFEE, DURANT, BILLINGS AND
GREENOUGH.**

**MR. CHAFFEE. CROSS-EXAMINATION CONTINUED BY MR.
BRADLEY.**

Q. Do you recollect the last question which was put to you on Saturday?

A. I do not know as I do precisely.

Q. The question was, when you were looking over the specification of your patent, to find there a description of the Hayward process. I read to you from your examination the statement that it was there.

A. Please repeat the question.

Q. I asked you to refer to that passage in your specification which describes the Hayward process?

A. The Hayward process as described in his specification?

Q. I don't care any thing about as described in his specification. That which you stated was the Hayward process where the rubber passed round the fast roller and the cloth round the slow roller?

A. I do not know what his process is further than the specification.

Q. I asked you, before asking you this question, if that was his process, and you said it was; then you had before said that his process was described in his specification. Now I ask you to refer to the passage?

A. What did I say was his process?

Q. His process was this: The spreading of rubber upon cloth between two cylinders, one moving faster than the other, the rubber being upon the fast roller and the cloth upon the slow roller. Now is that mode of applying rubber to cloth pointed out in your specification? You have said it was, and you have had till Monday morning to find out where.

A. The mode described in his specification is, to spread the gum upon cloth between two cylinders, one moving fast and the other slow; the same also in mine.

Q. Please point out where you find in yours that the rubber is applied to the cloth, the rubber upon the fast and the cloth upon the slow roller?

A. I don't see that it makes any difference which it is; the operation is the same and the result the same.

Q. Suppose we confine ourselves, not to operations but to facts. Is there any such process as that in your specification?

A. There is rubber on the slow and cloth on the fast.

Q. Is that the same thing as rubber on the fast and cloth on the slow?

A. The result of the operation is the same.

Q. That is another question. The fact that rubber on the fast and cloth on the slow is not in your specification, but on the contrary rubber on the slow and cloth on the fast—is that what you mean to say?

A. There is rubber on the fast and cloth on the slow both at the same time.

Q. You have stated that that is not in your specification; what do you say is in your specification?

A. There is in my specification, rubber on the slow and cloth on the fast.

Q. You testified the other day as to some experiments made by you, Mr. Stoddard and Mr. Durant, at your mill, for spreading the rubber on both sides

of the cloth by your machine, and here are some samples that were brought in; I notice that these were done where the rubber was on the fast, or with even motion; I will ask you why you didn't give us a sample of rubber on the slow roller?

A. We have given you a sample before, done on the slow roller.

Q. On both sides?

A. The other sample was not on both sides.

Q. What I asked Durant to do was, to give us a sample upon your machine of rubber put on both sides of the cloth, like this sample we produced.

Mr. RICHARDSON. We did it.

Q. Why didn't you give us a sample with rubber upon the slow roller?

A. It was not a proposition for me to carry out. I had nothing to do with it further than to execute what I was asked to do.

Q. Mr. Durant then requested you to do it with the rubber on the fast or even, and not upon the slow roller, according to your specification? Is that your explanation?

A. There is rubber on the fast as well as on the slow in these experiments.

Q. Just tell us where it is, rubber on the slow?

A. Rubber can be spread with that machine without any difficulty, and was always the case up to the time of my specification.

Q. With what motion?

A. With rubber on the slow and cloth on the fast.

Q. On both sides of the cloth?

A. As described in my patent.

Q. Did you say rubber had always been spread in that way before you took out your patent?

A. Yes, sir.

Q. Rubber had been spread on the cloth before you took out your patent, the rubber on the slow and the cloth on the fast?

A. Yes, sir.

Q. Who did it?

A. I did it.

Q. Before you took out your patent?

A. Yes, sir.

Q. Why didn't you make up a sample of it the other day?

A. I didn't know that I was called upon to do it.

Q. Are you willing to take a piece of cloth and spread the rubber on both sides of it, the rubber on the slow roll and the cloth on the fast, in the presence of this jury, or in the presence of any person whom we shall appoint?

Mr. RICHARDSON objected to any more experiments; they had had enough. The witness no doubt was willing.

Mr. BRADLEY. We ask the experiment because we think it cannot be done; now if he says it can be, we would like to have it done.

Q. Are you willing to do that?

A. I have already spent a good deal of time, and interfered with my business and machinery, and unless it is very necessary I would rather not do it.

Q. You say it is the same thing whether the rubber is put on the fast or slow roll, and the cloth on the fast or slow roll?

A. I understand it to be so.

Q. Does it operate practically in the same way?

A. It operates in the same way practically.

Q. If you draw a sheet of cloth between a couple of cylinders, the cloth on the fast and the rubber on the slow, is not that like drawing a piece of cloth over something you want to spread?

A. It is the same.

Q. The same as if you do it on a plain surface—that is, where the rubber goes fast it is wiping the rubber on the cloth; and where the cloth goes slow, it is like drawing the cloth underneath a substance. When you draw your cloth through, where the rubber is on the slow roll, doesn't the rubber bank up and make a kind of wedge between the two cylinders which tears and cuts the cloth?

- A. It does or not, according to the pressure; it does not tear the cloth.
- Q. That experiment that you have made so much time about in this matter you didn't want to try?
- A. I have made the experiment to coat cloth in that way.
- Q. When, where, and in whose presence did you make it?
- A. I made the experiment as long ago as this machine was made—in 1836.
- Q. That is so far back?
- A. I have made it since also.
- Q. We will take some subsequent time since?
- A. I have made it within a week since.
- Q. In whose presence?
- A. In the presence of my men at the factory.
- Q. Isn't it an every-day process—this covering cloth for lining shoes?
- A. It is.
- Q. In that every-day process which way do you apply the rubber to the cloth?—on the fast or slow roll?
- A. I apply the rubber on the fast and the cloth on the fast.
- Q. And the rubber on the slow?
- A. The rubber on the slow also.
- Q. What do you mean?—the rubber revolving on the even motion roller?
- A. Even motion.
- Q. You do it also where you have the rubber on the fast roll?
- MR. RICHARDSON. I want to know how he makes his shoe linings.
- WITNESS. The rubber is in the first place between the fast and slow roll, and it passes half round the fast roller and comes in contact with the cloth between the two fast rolls with even motion.
- Q. How is that?
- A. The rubber is in the first place between the fast and slow roll, and it passes in a sheet half round the fast roll, in contact with the cloth between the two fast rolls.
- Q. These fast rolls are with an even motion, you mean?
- A. Yes, sir.
- Q. Now do you not in your mill, use machinery where the cloth and the rubber go between rolls of an uneven motion?
- A. I use such machinery. I do not often use it in that way now.
- Q. When you use it, which do you put the cloth on, and which the rubber?
- A. I just stated it before, I believe.
- Q. I ask you to answer this question. In that case you put your rubber and cloth between two fast rollers, or two rollers of even motion; but when you use the uneven rolls do you put the rubber on the fast or slow roll?
- A. I say I don't often do it.
- Q. When you do it, how do you do it?
- A. I do it when I make experiments.
- Q. How do you do it when you do so?
- A. I used to do it so altogether in Roxbury—put the rubber in contact with the slow and the cloth with the fast.
- Q. Was that rubber dissolved with a solvent?
- A. It was not.
- Q. How do you do it in your present manufacturing where you cover cloth for shoe linings?
- A. I told you before that my practice was to put it on the two rolls of even motion.
- Q. You don't use two rollers of uneven motion?
- A. Seldom.
- Q. Don't you ever use two rollers of uneven motion for spreading your rubber for business purposes?
- A. I use them, certainly.
- Q. You do use them for spreading cloth for business purposes?
- A. Certainly.
- Q. In that case which roller do you put the rubber upon?

- A. Upon the fast and slow too.
- Q. Do you use it indifferently?
- A. It can't go on to the fast without coming in contact with the slow.
- The COURT. Suppose there are two rollers?
- Q. Yes, sir; suppose there are but two. It is a mere matter of fact that I ask you about, in your ordinary business; can't you answer?
- A. I have answered; I have given the answer exactly as I use my machines.
- Q. How is it?
- A. The rubber goes between the fast and slow roll in contact with both, and the cloth between the two fast rolls with even motion.
- Q. (By the COURT.) How many rollers do you use in that case?
- A. Three.
- Mr. BRADLEY. But he says the rubber goes between two rollers of uneven motion. I want to know in that case whether the rubber is on the fast.
- Q. (By Mr. RICHARDSON.) You say you have three rollers; you don't do it in the three-roller machine?
- A. I employ three rollers in that operation.
- Q. (By the COURT.) But when the rubber and cloth go together, they do not go between two rolls of uneven motion according to your account, but through rolls of even motion?
- A. They do.
- Q. (By the COURT.) The question is, when you put cloth and rubber both through rolls with uneven motion, on which roll you put the rubber?
- A. I have to say that I do not often do it; it is not my regular practice.
- Q. I understood you to say on your direct examination, that you had no means of raising these cylinders one upon the other, except by the rubber and cloth that passed between them—that these screws are only used for the purpose of pressing the cylinders down; is that so?
- A. That is the case.
- Q. Now suppose you put a sheet of rubber through there of a given thickness, and after doing that for an hour you want to make a sheet of twice the thickness, how do you go to work to do it?
- A. Ease up these screws; unscrew them.
- Q. You mean to say that the rubber here has sufficient strength, softened, to lift up that weight of rollers? What is the weight of a cylinder of that size?
- A. It weighs about six thousand pounds.
- Q. What is the weight of the other?
- A. It weighs ten times that.
- Q. What is the weight of that?
- A. About two thousand.
- Q. The next one?
- A. About the same.
- Q. Ten thousand pounds on this dissolved rubber?
- A. Softened; prepared rubber.
- Q. That was your only process; are you using this kind of spreading machines now, or any kind?
- A. I am.
- Q. Have you built a number of spreading machines?
- A. I have.
- Q. Have you some contrivance for adjusting these rolls one toward the other, in addition to this screwing them down in this way?
- A. I have a contrivance to separate the two upper when I wish to use the three rollers.
- Q. Do you have a means of raising and regulating the position of these rollers one toward the other, in addition to this means?
- A. I have, in my present machine, screws to raise the lower roll. The three upper rolls are regulated only by these screws.
- Q. How many rollers have you in the machine?
- A. Four.

- Q. Which one is fixed?
- A. The one next to the bottom.
- Q. Then if this is fixed, it is not regulated by this, but you press the lower one up against that by a screw, and put it up or down just as you please?
- A. Just as I please.
- Q. How is it with the upper rollers? Does the screw carry them down towards the fixed roller?
- A. It carries them down.
- Q. Does it carry them up?
- A. It does not; it can be taken up entirely; this is so attached that it will raise them up entirely free.
- Q. Then you can raise the upper ones as well as the lower by machinery?
- A. I can.
- Q. Is that the way in which all machines are used?
- A. Machines are built in that way, I believe.
- Q. You spoke of disengaging the upper rollers; how did you do it in the monster machine?
- A. I did it by taking the key out of the wheel.
- Q. What became of the cylinder then?
- A. It would stand still, and would not revolve at all when the rubber was in it.
- Q. That was your method—your only method?
- A. That was my method of disengaging.
- Q. You say that these cylinders, when used for grinding, if they are five feet in length, ought to be sixteen inches in diameter?
- A. I gave that as a good proportion.
- Q. The bars are six feet long, twelve inches broad, and three-quarters of one-half an inch thick; what proportion does that bar bear to a cylinder five feet long and sixteen inches through?
- A. I am unable to state what proportion it does bear.
- Q. When you got up this machine, did you get it up as a single machine to prepare rubber on this part, and spread it directly on the cloth on that part? Is that your plan in the specification?
- A. It is not the plan, I believe, in the specification; the plan described there is, to take it from one machine and put it into the other.
- Q. It is not described as a single machine in the specification?
- A. It is there called a single machine, I believe.
- Q. How many other machines did you have at Roxbury in addition to this monster?
- A. I had two others, one of which was occasionally used, and the other pretty constantly.
- Q. (By Mr. RICHMOND.) Let us have the date of them?
- A. I cannot fix the date better than this: one of them was in use occasionally at the time the specifications were made out, and the other was not in use till soon afterwards.
- Q. Describe the one that was in use when the specifications were made out?
- A. It consisted of a single cylinder acting against a plate of metal, the rubber passing between the cylinder and that plate of metal.
- Q. What was that used for?
- A. For breaking in, as it is commonly termed—the first grinding of the rubber.
- Q. Was the rubber made plastic at all by that process?
- A. It was.
- Q. When was the other machine made to which you refer?
- A. That was put in operation soon after the specification was made out.
- Q. Was it put in operation before the patent was taken out?
- A. It was.
- Q. Will you describe how that was made?
- A. It was made with three cylinders, one above the other.
- Q. How did they revolve upon one another?

A. With a friction motion.

Q. Heated?

A. Heated.

Q. Cold water introduced?

A. Cold water was subsequently applied to it—not at first.

Q. What was it used for?

A. For coloring, and grinding in the lampblack.

Q. For any thing else beside coloring?

A. It was not.

Q. How much money was spent at Roxbury in various experiments, your salary included, in getting up this monster machine?

Objected to by Mr. Richardson, as immaterial.

Mr. BRADLEY wished to prove the amount of money spent on what was, after all, a failure.

The COURT ruled the question out as unimportant. The cost of the machine would not affect its use; they might have made them cheaper since.

Q. Have you ever used what you claim to be your process, and used camphene in connection with it?

A. I have experimented in that way, and have used it occasionally in business.

Q. (By Mr. RICHARDSON.) For spreading or grinding?

A. Spreading.

Q. How is it with grinding?

A. I have ground it with some camphene in it.

Q. Is the grinding of rubber with solvents mixed with it, included in your process?

Mr. RICHARDSON. That is a question of the patent.

A. I so understand it.

Mr. RICHARDSON. What you understand about it we object to.

The COURT ruled that it was necessary for the witness to state how he understood the specification, but not what he claimed specifically; that must be determined by the patent.

WITNESS. I must explain.

Mr. RICHARDSON. You need not; this is a direct question of construction.

The COURT. He must not state it for the purpose of construction.

Mr. BRADLEY. The question was, did what he claimed to be his machine include rubber with solvents.

Q. Were you ever in the employ of Onderdonk & Letson?

A. I was.

Q. Didn't you use camphene there entirely, when you wanted to apply rubber to the second side of the cloth?

A. It was so used by their original camphene machine.

Q. What is the difference between what you call their original camphene machinery and yours?

A. The spreading calender consisted of only two cylinders.

Q. What else?

A. No other essential difference.

Q. Did you get up what you call your process there? What sort of machinery was that?

A. That was a calender with three cylinders.

Q. Did you use camphene on the three-calender machine?

A. I do not remember doing so.

Q. Did you not practise while you were there, covering all your cloths with camphene on one side?

A. I covered some without.

Q. Didn't you use camphene gum on one side of cloth that you used for shoe-lings and piping, as it is termed?

A. It was generally used so.

Q. With your machine?

A. I did not say with my machine.

Q. You said your machine had three cylinders; did you use it in that three-cylinder machine or not?

A. I did not.

Q. You mean to say then that you didn't spread camphene gum on one side of the cloth where the three-cylinder machine was used?

A. I do not recollect doing so.

Q. Did you ever make them any other way?

A. I made them by the other machinery as I said before.

Q. Did you use your three-cylinder machine there?

A. I did.

Q. For the purpose of spreading rubber on to cloth?

A. For spreading it on to cloth sometimes.

Q. For linings of shoes?

A. For other purposes.

Q. Did you spread rubber on to cloth for shoe-linings?

A. I said before that I did not on that machine very often.

Q. When you did, did you use camphene on one side of the cloth or not?

A. As I said before, I do not recollect using camphene on that machine.

Q. Did you ever get up machines for Dr. Hartshorn?

A. I superintended the construction of machines for him.

Q. When was it?

A. I think it was in 1846.

Q. When were they put up?

A. I cannot state when they were put up.

Q. How did they revolve upon one another?

A. With even motion—two of them; and I think one with friction. Of that I am not certain.

A. How did the calenders with three cylinders revolve?

A. Even motion, with two cylinders, and uneven with the other, as near as I can recollect.

Q. Can you remember positively about it?

A. I do not remember, but it may have been an even motion throughout the whole, for what I can remember.

Q. Did you make some grinders for him?

A. I did.

Q. Were they with an uneven motion?

A. They are.

Q. What grinders did they have before?

A. I do not know what they were, except some small grinders in his factory, that I had seen there occasionally. I do not know whether I can give a correct description of them.

Q. What was their motion—even or uneven?

A. I do not know.

Q. State the best of your recollection about that?

A. I could not say.

Q. How often were you there?

A. I cannot say—half a dozen times in my life, perhaps.

Q. What years were you with Onderdonk and Letson?

A. 1847 and '8 and '9.

Q. When you were there were you employed in superintending the manufacture of vulcanized shoes?

A. I was.

Q. How did they turn out?

A. Those that were made altogether by the camphene process turned out pretty bad.

Q. Did you always make them with the camphene process while there?

A. Camphene was used in part always.

Q. You mean always while you were there?

A. I believe it was.

Q. Didn't you have the control of the business?

- A. I did, principally.
- Q. If you came there with your invention, why did you use camphene?
- A. We could not have found time to spread gum enough on the other machine if we had wanted to.
- Q. I ask you why you used camphene?
- A. I believe I used it at the recommendation of Onderdonk.
- Q. Did you go there to instruct them in the business and to take charge of it?
- A. I did.
- Q. Were you not under a contract with them to devote your whole time for the benefit of their business?
- A. I was.
- Q. Did you while there communicate information as to a mode of making such shoes to Dr. Hartshorn and receive money for it?
- A. I communicated information to him as agreed upon in Naugatuck before I left him.
- Q. Was the agreement made in Naugatuck with Dr. Hartshorn or with Onderdonk & Letson?
- A. It was made in Naugatuck.
- Q. I think you stated the reason of the failure of the Roxbury Company on your direct examination?
- A. I cannot remember whether I have on this trial or not.
- Mr. RICHARDSON. We have not inquired in regard to that; he stated the reason—that the goods were bad.
- Q. What was the reason of the failure of the Roxbury Company?
- Objected to, as opening the whole question.
- Q. Have you stated at any time heretofore what the reason of the failure was?
- Objected to.
- The COURT. The only material view in which the question could be resolved, I suppose, would be to show whether it was in consequence of the machine's being bad or not.
- Mr. RICHARDSON. That would be upon the value of the patent, and they cannot rebut upon that subject.
- The COURT. This is certainly not a part of the cross-examination. I think we have got that stated enough from other witnesses, so as to be in the case some way or other.
- Mr. BRADLEY. We know this examination has been very long; but the witness has gone over twice the ground that he did in New York, and in about half the time. It has been as brief as we can make it.
- The COURT. I think you must have exhausted him upon your cross-examination. You have only a right to rebut. Whether you have or have not asked that question, you have no right to return to that again from any thing which they have taken. I do not think it is in order; you should have asked him before.
- Mr. BRADLEY. They asked him how much he had made—the value of his patent.
- The COURT. Extended patent.
- Mr. BRADLEY. The whole—the value of his patented machinery and process.
- The COURT. Well, put it in; I think the other side had better not object for prudential considerations.
- Q. What was the principal cause of the failure of the Roxbury Company, in which you were concerned?
- A. There were several causes doubtless; I don't think I can give the principal cause. I think it was owing to their speculations in a great measure.
- Q. Have you stated this: (Reads from an affidavit of witness, in which he says that one of the principal causes of the failure of the Roxbury Company and other companies in and about Boston, was the want of a knowledge of a method of vulcanizing India rubber.) Can you now state whether that was the principal cause of the failure?

Mr. RICHARDSON objected, that it was opening an entirely new field, and not upon the point claimed by the gentleman. He objected moreover to the method of putting the questions by reading an affidavit.

Mr. JENCKES. The gentleman asks the witness if one of the reasons of their failure was not the want of something which was not in existence at that time.

The COURT. The question is if they had had something better—if they had known Goodyear's process, whether they would have failed or not. That is to say, if things hadn't happened as they did, there is no knowing how they would have happened. You must take things as they existed at that time, and inquire what was the cause, and not what you speculate upon—that they would not have failed if they had understood all these other matters. You have stated that this machine was good for nothing without the process of Goodyear. If that is true at all, it should be put by a direct question. It is not to be got in in this indirect way. I will allow you to put the question distinctly, how this company came to fail, and what was the principal cause; but I do not allow you to read that affidavit by way of putting another question.

Mr. BRADLEY. He said he could not recollect.

Witness. I said I could not state.

The COURT. You may state now in answer to the question put to you as to what was the cause.

Witness. I conceive that the principal cause was their speculations and the bad gum which was at that time used.

Q. You mean to say speculation in bad gum, and bad gum itself, were the principal cause?

A. Speculation in stock and goods manufactured to keep up the value of the stock were the cause of the failure more than any thing I know of.

Q. What other principal cause was there?

A. The use of bad gum, which made bad goods, was a part, perhaps.

Q. Is that all the answer you have to make to the question?

A. All I have to make now; I have made some other qualified answers.

Mr. BRADLEY. I now propose to ask him if he has not given certain other answers, under oath, to that same question different from what he has now given, with a view, among other things, of impeaching the witness?

Mr. RICHARDSON contended that they had made this witness their own, and could not, therefore, turn round and contradict him.

After further argument by counsel,

The COURT said that it struck him that the evidence went to determine one of the questions in issue; that is to say, as to the value of this machine, and so far was collateral upon the direct, and that therefore the defendant was not concluded by the witness's answer, but had a right to put the question, whether he had answered it on another occasion or not.

Mr. RICHARDSON insisted that the affidavit should be submitted to the witness.

Q. Is that your signature?

A. That is my signature,

Q. Did you swear to that?

A. I did.

The COURT. Direct his attention to that particular part.

The WITNESS having said that he made the statements in the affidavit,

Mr. BRADLEY proceeded to read certain statements therein contained, in which the witness gave as a reason for the failure of the Roxbury Company, the want of a proper preparation of the article of rubber, so as to prevent its becoming tacky or sticky, and that these objections were never overcome until they were overcome by Charles Goodyear.

Mr. RICHARDSON proposed to read the whole affidavit.

Mr. BRADLEY objected.

Mr. RICHARDSON. We will see, then, if we can't get it when the gentlemen get through.

Q. Have you ever made a statement in regard to this matter when under examination in New York?

A. I believe I did.

Q. What was your answer there to the same question?

A. Repeat what the question was?

Q. What was the cause of the failure of the Roxbury Company?

A. I believe I stated in New York that it was in consequence of speculations in part.

Q. Look and see if this was the question and this the answer you gave there (handing him the record)?

A. That question was asked, and that answer made also.

Q. (Reads.) "Was not the main reason why the business could not be carried on successfully, with the aid of your invention, that the method of vulcanizing had not been brought into use?" Answer: "If that patent had been brought into use early enough, it might have saved them from failing."

Mr. RICHARDSON. Won't you read the one before that? you exhibited it to the witness.

Q. (Reads.) "Did not that company break down and fail?" Answer: "It did, I suppose; it lost a large portion of its capital stock."

Mr. JENCKES. You didn't show that to the witness.

Q. (Reads.) "At the time it broke down your improvement had been fully introduced, had it not?" Answer: "It had." Question: "Why didn't it make money out of your improvement?" Answer: "It did make money out of it." Question: "Why didn't it succeed by it?" Answer: "Their losses were, to a large extent, owing to speculation in stock." Question: "Have you not sworn as follows: 'This deponent swears that one of the principal causes, &c.'?" Answer: "I believe I have,—something of that import." And that was true when you swore to it?

A. I supposed it was.

The COURT. I think, in justification, the witness ought to be allowed to state wherein it is true. Perhaps it is all true; if it is not, the jury ought to know what part.

Q. Did you make this answer?

A. There are a number of answers there.

The COURT. Hasn't he qualified that answer in any way, or taken it back, or explained it?

Witness. It requires qualification.

Q. Very well; qualify it as you think it requires?

A. If it had been introduced while they had plenty of money to perfect the Goodyear invention, it might have saved them.

The COURT. It is hard work to save any body without money.

Direct resumed by Mr. Richardson.

Mr. RICHARDSON claimed the privilege of putting in the whole affidavit that had been referred to by the defendants, for the purpose of examining the witness.

The COURT ruled that every thing in it connected with the answers that the witness had given, and going to qualify them, might be offered.

Mr. RICHARDSON insisted that every thing in it went to qualify the language referred to.

The COURT then perused the affidavit, and remarked that there were some things in it, in relation to how much he received for the patent, &c., which should not go in.

Q. Have you any knowledge what effect the Goodyear patent, if it had been in existence in 1836, would have had upon the trade in India rubber, except mere theory?

A. I have not.

Q. When you were inquired of in reference to its effect upon the Roxbury Company, the answer you gave was a theoretical conclusion of yours, wasn't it?

A. It was.

Q. You said that one of the principal causes of the failure of that company was their speculations in stock; do you still adhere to that?

A. I do.

Q. Was that the principal cause?

A. I think it was one of the most important causes.

Q. What do you mean by speculations in stock? Tell us how that was done?

A. The operations of the stock were, after paying in a portion of their capital, stock was issued to double the amount of capital; double the amount of certificates were issued to the holders of the original stock. That is, if the original stock was at a par value of \$100, the new stock which was issued was two certificates for \$100, the holders paying in only \$100 for the two certificates, thereby doubling their capital stock in money, and trebling their number of certificates. And in order to keep up the price of stock, a much larger amount of goods was manufactured than there was any demand for in market. They came home upon the factory, both the good and the bad, in large quantities.

Q. At whose request did you make these affidavits in that Goodyear suit?

A. One at Mr. Staples' request, and the other, I think, at Goodyear's.

Q. Was it true in point of fact that the India rubber trade was improved by what is called the Goodyear vulcanizing process?

A. It is true, now, at this late date.

Q. Was it not true in 1834, '35 and '36, that all goods made of India rubber, where it was necessary to subject them to heat and cold, were defective?

A. They were defective as to being hard in cold weather, but those which had lampblack in them would stand any hot weather without melting.

Q. The kind of goods that were better made by the heating process could not be effectually made in 1835 and '36 on that account?

A. They could not.

Q. Was not that an embarrassment to the business which was tried to be overcome?

A. That was thought to be an objection to the goods.

Q. That is what Goodyear's process was intended to overcome?

A. It was.

Q. Had this grinding and spreading process of yours any thing to do with preventing the rubber growing stiff in cold weather?

A. It had not.

Q. It had no connection with it?

A. No connection with it.

Q. I want you to state a little more fully the reason why you used camphene in Onderdonk & Letson's factory?

A. I do not know that I can give any other reason than that we were always in the habit of doing so, and didn't consider the very thin coats which were then used would actually spoil the goods.

Q. Had they machinery proper for manufacturing as they now manufacture with your process, at that time?

A. They had a machine—I am not sure whether it had a friction motion or not; I am inclined to think it had not.

Q. Were you employed to put up any machinery for them?

A. Machinery was put up while I was there.

Q. Was it put up under your direction?

A. It was not.

Q. Who put it up?

A. It was under the direction of Messrs. Bird & Weld.

Q. Did they put up any grinders?

A. They did.

Q. How were they used?

A. For grinding without solvents.

Q. Were any spreaders used there at that time?

A. There were.

- Q. How were they used?
- A. For spreading the sheets upon cloths with aprons.
- Q. What sort of cloths were they making at that time?
- A. Shoes.
- Q. What kind of shoes?—common India rubber shoes?
- A. Such as are denominated vulcanized shoes.
- Q. After you got the new machinery, did you make the vulcanized shoes by your process?
- A. I did in part; I made sheets of it.
- Q. Were they then Hoossees of Goodyear?
- A. I do not know what time they were Hoossees of Goodyear.
- Q. Don't you know they considered themselves infringers?
- A. They were, at first, when I first went there, I believe.
- Q. Were they not sold while you were there?
- A. I do not know as to the suit.
- Q. What information did you agree to communicate to Hartshorn? About what did he want to know?
- A. About the manufacture of India rubber.
- Q. Were you experimenting at that time in compounds?
- A. I was.
- Q. Was it in reference to compounds that you were experimenting for him?
- A. I had been in Naugatuck.
- Q. Experimenting for Dr. Hartshorn in compounds?
- A. I was.
- Q. Was that the information you gave him?
- A. It was.
- Q. Hasn't there been always a continued experimenting in the India rubber business in regard to compounds?
- A. There has.
- Q. Hasn't there been a constant change in the compounds used?
- A. There has.
- Q. In reference to your experiments you have been making for Goodyear, were not those also in reference to compounds?
- A. It was, principally.
- Q. Had those experiments which you were communicating to Hartshorn, any thing to do with your process for grinding without a solvent?
- A. They had not.
- Q. You said that you sometimes disengaged the upper roller in your present machine; how do you do it?
- A. I have some screws placed between the box and the upper roll and the box and the lower roll, or one beneath it, which, on turning, separates them.
- Q. The object of that is to separate or disengage the upper roller?
- A. Yes, sir.
- Q. How did you do that in the monster machine?
- A. Instead of disengaging the upper roller in that way, I merely took the key out from the gear wheel which stopped its revolution and stopped the friction; it revolved then by contact with the other roll.
- Q. Does that operate well?
- A. It does.
- Q. What is the convenience of having this screw instead of disengaging it in that way?
- A. It is only a little more convenient to turn these screws than to take out the keys.
- Q. Is there any thing substantially better by it?
- A. There is not.
- Q. You were asked, when the cloth goes between the two rollers, one slow and the other fast, and the rubber with it, on which roll you put the cloth, and you didn't answer that question as I understood it; I want you to answer it now, according to your present practice in your factory?
- A. I put the cloth on the fast roll; that is my usual practice.

Q. Did you have any conversation with Mr. Hutchinson prior to his going to Europe?

A. I did.

Q. When was it?

A. It was a short time before he went to Europe.

Q. Did you say any thing about this patent?

A. I did.

Mr. BRADY here objected to any questions being asked about what Mr. Hutchinson stated in his deposition until that deposition was put in.

Mr. RICHARDSON said that this evidence he now wished to put in was omitted on the direct, and he stood upon his original right to put it in.

Mr. BRADY said that this particular answer to which the gentleman referred, had not been read from the deposition.

The COURT ruled that the counsel had no right to produce this witness to contradict Hutchinson, and prove that he said differently from what he in his affidavit, unless they laid the foundation for it. But upon the question of Chaffee's giving notice to Hutchinson, as one of the licensees, that the instalments were not paid, so far as that goes, he thought they might be allowed to produce the evidence.

Mr. RICHARDSON. If he has stated to the contrary, the rule of law does not prevent our proving a material fact.

The COURT. No, sir.

Mr. BRADY did not object to their asking Chaffee what he said to Hutchinson at any time, if they would allow him to go back to the point where his honor excluded it, and put it in.

Mr. RICHARDSON. I do not propose to go into an inquiry about Bourn & Brown, but only into the conversation about the non-payment.

Mr. BRADY (to witness). When was this conversation?

WITNESS. A short time before his leaving for Europe.

Mr. BRADY. In Broadway—in the street?

WITNESS. In Broadway—in the street.

Q. State what it was without reference to any thing about Bourn & Brown.

Mr. BRADY. I want the whole if they ask any thing about it.

The COURT. It strikes me it is irrelevant to the case. If a part is relevant and a part not, we have a right to exclude what is irrelevant.

Q. What did you say?

A. I informed Hutchinson that Judson had stopped his payments of my annuity, and that I intended to make some other disposition of my patent. He said I had better not do so, unless I had plenty of money to spend in law. As to Bourn & Brown I have no recollection of what was said.

Re-cross-examined by Mr. Brady.

Q. What were you doing in the city of N. York at that time?

A. I cannot distinctly remember what I was doing.

Q. Can't you remember what business brought you to New York on that occasion?

A. I do not.

Q. Can you remember what month it was?

A. I cannot.

Q. What year?

A. I should think it was in 1852.

Q. What month?

A. I said I could not state the month; I do not know when he went away, but he told me he was going in the course of a week or so.

Q. He went away on the 16th of February, 1852; how long was it before he left?

A. It was in the course of a week or two before he went to France.

Q. Was it not on the occasion when you were in N. York negotiating with Judson about the payments that were withheld from you?

- A. It may have been somewhere about that time.
- Q. Wasn't it?
- A. I said before I cannot fix the date of it.
- Q. Did you know at that time that Hutchinson had parted with all his interest in the India rubber business in the United States?
- A. I don't know that I did.
- Q. Didn't he tell you so in that conversation?
- A. I don't recollect of his doing so.
- Q. Did you ask him what he would advise you to do?
- A. He did advise me.
- Q. Did you ask him?
- A. I do not recollect of asking him.
- Q. Did he advise you?
- A. He did advise me in regard to this matter.
- Q. What advice did he give you?
- A. He advised me not to make any other disposition of it, unless I had plenty of money to sustain it.
- Q. Is that all he said?
- A. That is all that occurs to me.
- Q. Did he tell you any reason why he supposed the payment had been withheld?
- A. He did not.
- Q. Did he advise you to make any arrangement with Judson at all?
- A. He recommended that I should make some further arrangement with Judson.
- Q. What arrangement did he suggest?
- A. He did not suggest any.
- Q. Did he say any thing about Bourn & Brown in that conversation?
- A. I have no recollection of his saying one word at that conversation about them.
- Q. Or about your connection with them?
- A. Or about my connection.
- Q. Or about any claim that they were infringing Goodyear's patent?
- A. I have no recollection of it.
- Q. Didn't you correspond with Judson after that conversation, that you remember?
- A. I don't think I did.
- Q. Or have any interview with him after that?
- A. I don't think I did.
- Q. Did you after that in any conversation tell Judson you were going to sell the patent?
- Mr. RICHARDSON. That is wandering.
- The Court. You ought to have gone over that before; unless you throw yourself upon the mercy of the court you cannot do it now.
- Q. (By Mr. BRADLEY.) I understand you to say that the practice in your business is to put the rubber on in a certain way as you described; will you allow any person to see that practice?
- (Objected to.)
- The Court. That is his own business.

MR. DURANT RECALLED, AND EXAMINED BY MR.
RICHARDSON.

Q. Did you go in pursuance of some sort of understanding to Dr. Hartshorn's factory?

A. I did.

Q. Did you see them make some cloth?

A. I did.

Q. Is the piece of cloth that they made here?

A. I understand it is ordered here.

(The piece of cloth was here produced.)

Q. Did you put any mark upon that made at the factory?

A. I did.

Q. See if you find the mark?

A. I find the mark put on.

Q. (Unrolling the cloth.) That is the specimen they made?

A. That is the specimen.

Q. Tell the jury how they made it on the Blackford machine?

A. The rubber is put between two rollers—I may call them fast rollers in contradistinction to the third roller—rubber prepared without a solvent. It passes entirely around one roller, then the cloth is entered between the third roller which is slow and the roller coated with gum. It passes through, and the operation is, to spread a thick sheet of rubber on to one side of the cloth. That remains there for about one quarter of a revolution of the cylinder; then some nine-tenths of it is stripped off by rolling the cloth off, leaving a small portion of the rubber on the cloth. The rubber passes entirely around one roller—the fast roller, and remains there, a portion constantly feeding, if the cloth is going on, at the place of contact between the two fast rollers. After it has passed through once it is collected on a roller by a man; it is then passed through again with the opposite side of the cloth—the side not coated—turned to the rubber, and the same operation occurs again; that is, the sheet that is on the fast roller is pressed on to the cloth and remains there for about one quarter of a revolution of the cylinder; then the cloth is drawn off—stripped from it—stripping off probably nine-tenths of the sheet that was pressed on it.

Q. Then you draw the cloth from the rubber that is pressed on to the rollers and leave a portion of the rubber on the cloth and a portion on the roller?

A. That is so.

Q. Did they show you any other way of making it?

A. No other; I understood then that is the only way.

Q. That is the way that piece is made?

A. That is the way it is made.

Q. You remember some specimens were made at Chaffee's factory prior to that time; did you make them exactly that way?

A. They were by the same process of passing through rollers, but an entirely different operation. They were not torn from the rubber; they were intended to press the rubber on to the cloth, and keep it there.

Mr. BRADLEY. Let us know what you mean.

Mr. RICHARDSON. I mean these specimens, (exhibiting them).

WITNESS. This was done in the same way; the same operation.

Q. That is like the sample given by the other party?

A. An exact copy of the pattern given me; that is, a sheet of rubber spread on to cloth, as I have already described.

Q. Before you went to Hartshorn's factory you made that in the same way on the Chaffee machine, pulling it off in the same manner?

A. I did, identically.

Q. Show us the cloth you made on the Chaffee machine?

A. (exhibiting it.) This is a piece of cloth made on the Chaffee machine in precisely the same way—with the same gum taken from Dr. Hartshorn's and the same cloth also taken from Hartshorn's.

Q. Is there a whole piece of it?

A. There is a whole piece of it, made identically in the same way. The rubber enters between two fast rollers; it passes entirely around one roller; the cloth is then passed between the third, the cloth in contact with the slow roller, while the rubber is in contact with the fast. (Remainder of process described as before.)

Q. Did they show you any other specimen, or any other manufacture at Hartshorn's factory.

A. None.

Q. Is that operation described by Bickford?

A. It is not described there.

Q. It is the Bickford machine?

A. It is the so called Bickford machine.

Q. Horizontal rollers?

A. Horizontal rollers. There is only one operation described here, and that is pressing and fixing the rubber on to the cloth.

Q. Is that the result of the operation described in that specification? (Exhibiting another specimen.)

A. Exactly; precisely.

Q. Is the process by which you made this sample described by the Bickford specification?

A. It is; this is precisely the operation.

Q. At Hartshorn's factory did they show you the making of but one piece of cloth or one sample?

A. Only one.

Q. And that is the one produced in court?

A. The same one. I believe there were two pieces of it, a large and small one, but made both alike.

Q. That is not described in the Hayward and Bickford specification?

A. It is not.

Q. And that is what you described as having been previously made by the sample.

A. By the sample.

Q. Was Professor Horsford with you?

A. He was.

Q. Did he go to Chaffee's factory and see you make that piece of cloth?

A. He did.

Q. Did you make any thing else there?

A. I did after Professor Horsford left.

Q. Did he leave when you had made the first piece?

A. He did after it was finished.

Q. What reason did he assign?

A. I think the reason he assigned was that I would not take the gum off the then fast roller and put it on another roller, so as to try a particular experiment which he desired.

Q. What experiment did he want to try?

A. I don't recollect which one he wanted me to try, but I recollect this, that I told him I would try every one he desired. The rubber then being on the fast roll, I preferred, as it would save half an hour, to try the next experiment which would leave the rubber on that roll; that is, press the cloth through with the rubber and cloth even—two fast rollers. And I did so, and he left at the start of that operation.

Q. He staid till you had done the first operation?

A. He staid till that was finished.

Q. Did you have the same gum and the same cloth?

A. The same gum and the same cloth. We cut the pieces in two at Hartshorn's to be sure there was no mistake about it.

Q. You used the Chaffee machine, and they the Hayward?

A. Yes, sir.

Cross-examined by Mr. Bradley.

Q. At Dr. Hartshorn's factory the rubber and the cloth went together between two cylinders, one going faster than the other?

A. That is so.

Q. Upon which roller was the cloth?

A. Upon the slow cylinder.

Q. The rubber upon the fast?

A. Of course.

Q. And at Chaffee's factory the rubber and cloth went between two cylinders; what was the motion of those cylinders?

A. The motion was fast and slow.

Q. Upon which cylinder was the cloth?

A. Upon the slow roller, precisely like the other.

GEORGE A. BILLINGS, SWORN AND EXAMINED BY MR.
RICHARDSON.

Mr. Billings was called merely to swear to the serving of a notification on Dr. Hartshorn on the 2d day of July, 1858, of which a copy was produced and read, that Judson had no authority to act as Chaffee's attorney.

Mr. JENCKES offered in evidence the bill in equity, against Dr. Hartshorn and others, founded upon this patent, filed July 18, 1858; also the subpoena, served the same day, and a second one, served on the 8th of August.

Mr. RICHARDSON wished to refer to a deposition, to which was attached a bill in equity, signed by Charles Goodyear, on the 12th of October, in London, merely to show that Mr. Goodyear was there at that time.

Objected to by Mr. Brady as incompetent; objection sustained.

Mr. RICHARDSON then offered a certified copy of an agreement by Judson, to sell an exclusive license to the four associates, to use the Chaffee patent, dated May 25, 1858.

And in connection with the same, a license made by Mr. Judson and the four associates, in which these defendants joined, to the Malden Rubber Company, in which Judson claimed to be the absolute, unconditional owner of the Chaffee patent.

Mr. BRADY objected to both the papers, as no evidence in themselves.

The question of their admissibility was argued at length, and the decision reserved till the next day, when the Court ruled them out.

The plaintiff here rested his case, except with regard to the papers. In the mean time the defendants were notified to produce the originals.

JOHN G. GREENOUGH SWORN AND EXAMINED BY MR.
BRADLEY.

Q. Were you ever connected with the rubber business in the city of Troy?

A. Yes, sir.

Q. What year?

A. 1835 and '6.

Q. What kind of machinery did you use for preparing your rubber, and for spreading at that time?

A. In the first place we used wooden mills to grind the rubber and spread it, with a frame or rack, made of plank, to dry the rubber upon.

Q. (By the Court.) Was this used in 1835?

A. Yes, sir, in the winter of 1835 and '6. I commenced to build the factory in August, 1835.

Q. State whether you ever used cylinders for that purpose, and if so, of what material?

A. We used cylinders in February and March and April, made of iron.

Q. How many?

A. We first made two, and I found that they didn't work very well, and added one to them.

Q. Where did you obtain your cylinders?—the plan?

A. Mr. Stone wished me to go to Philadelphia, and any other place that I thought necessary to get information. I went to Philadelphia, and in all the machine-shops and manufacturing places where I thought they would use such things. I went into the Cohoes and Ida mills, and into quite a number of paper mills. I got the idea of heating the calenders with steam from the paper mills.

Q. Then your calenders were heated by steam as well as made of iron?

A. If I remember right the large rollers were two feet in diameter and something like fifty or sixty inches long. Then, when we had the third roller, it was a smaller one, placed in the middle, the same as these are (referring to a model)—the smallest one in the centre.

Q. You say, the largest was two feet in diameter; what was the size of the smallest?

A. I do not know exactly; I think it was one-third or one-half less, as near as I can remember. I have not done any business of that sort in 18 years.

Q. The upper and lower cylinders were of the same size?

A. Yes, sir; and the gearing was of the same size.

Q. That made what kind of a revolution—equal or unequal motion?

A. Unequal, because the gearing was all of a size. Our wooden mills worked badly—didn't make good cloth; the rubber would be uneven on the cloth.

Q. How were your wooden mills constructed?

A. Hard wood, in a vertical position, revolving between slata.

Q. How did you use your machinery in connection with rubber?

A. Our cloth was uneven that was made in the old way—the way that we first used. By putting it through the calender we found that there would be an accumulation; it rolled back the calender and would make it uneven. Then we thought we could make the calenders do the whole as well as a part, and that led us to attempt to grind rubber with the calenders heated. We found that we could do it with less spirits; (we used turpentine as a solvent,) then we found that we could do without spirits, and as soon as we got to making cloth nicely, we were burnt down, and that was the end of our story.

Q. Did you grind rubber without a solvent?

A. Yes, sir.

Q. And spread it into cloth without?

A. We were making then cartridge boxes for Government. I do not know as I can remember the size, but they were some 18 or 20 inches square, and not quite so deep. They were made of canvas—rubber spread upon canvas.

- Q. Describe how you put the rubber on to the cloth?
- A. When we put the rubber in, after it had been through a few times, it would adhere to the fast rollers, either the bottom or top, just as we saw fit to make it; and then, when we attempted to put it on the cloth, the rubber would be on this upper roller (referring to the model), and the cloth came through here, down back again there, and came out this way.
- Q. Which was the fast roller?
- A. The upper and lower ones were fast rollers; the middle one was about half the size, with the same gearing as the others; the rubber would adhere to the fast rollers,—the top and bottom ones.
- Q. Did you make any quantity of these goods, and carry on a business?
- A. We were first going into it very largely; but I don't know how much was made; it was not my part of the business to do it.
- Q. What was your part of the business?
- A. To build the buildings, and keep the machinery.
- Q. What the extent of the business was you do not know?
- A. It was not my part; we were about finishing it up nicely when we were burned down.
- Q. How large an establishment had you?
- A. The building was 75 feet long by 40 odd,—three stories.
- Q. Can you give the weight of these cylinders?
- A. I cannot remember the weight of the small ones; the large one weighed, besides the shaft, which was four inches through and about six feet long, something like 3,300 or 3,400 pounds, I think.
- Q. Were they driven by steam?
- A. Yea, sir; we had a 12 horse power engine.
- Q. How did you get the steam into them to heat them?
- A. In the centra (referring to the model) here.
- Q. What is your present occupation?
- A. A builder.
- Q. In New York?
- A. Yea, sir; I have not done any thing in the rubber business for 18 or 19 years.
- Q. Where did you state that you got the idea or plan of the machinery? from what sort of business did you take it?
- A. I took it from paper mills; I was conversant with some mechanics; I knew one of the most excellent mechanics, by the name of Baker; he gave me more ideas than I got any where else; but the idea of heating by steam I got from a paper mill in Troy.
- Q. You got no information from any rubber factory?
- A. No, sir; not of any thing of this kind.
- Q. How long had cylinders been heated by steam in paper mills in Troy?
- A. I think the one I saw had been in operation five or six years at that time.
- Q. Do you know how these cylinders moved in the paper mill, whether with an even or a friction motion?
- A. I think they had a friction motion; I am almost sure they had.
- Q. What material were they made of?
- A. Copper.

Cross-examined by Mr. Richardson.

- Q. You say you went to Troy in 1835; where did you go from?
- A. Boston.
- Q. Had you ever had any thing to do with the rubber business there?
- A. No, sir.
- Q. Who applied to you to go?
- A. I cannot remember whether it was Bigelow & Banks or Field & Converse.
- Q. Wasn't it Butler?

- A. Butler was connected.
- Q. Didn't Butler apply to you to go to Troy in 1835?
- A. I cannot say whether it was him or Converse.
- Q. Who went to Troy with you?
- A. Nobody; I went alone.
- Q. Did you have any conversation with the South Boston rubber folks before you went to Troy?
- A. I do not remember any conversation there.
- Q. Did you know Mr. Dexter before you went?
- A. I did; or afterwards I knew him when he was a custom house officer.
- Q. You were a mere carpenter?
- A. A builder and carpenter.
- Q. Had you ever made any iron work or other machinery at that time?
- A. Yes, sir.
- Q. Where?
- A. I did considerable of it at Sandwich, Massachusetts.
- Q. Did you learn that trade?
- A. No, sir; I was a regular carpenter by trade.
- Q. What did they tell you they wanted you to go to Troy for?
- A. To do every thing in the line of building machinery and building.
- Q. Did they employ you in reference to building machinery?
- A. Yes, sir; Mr. Stone employed me.
- Q. Did Stone come on to Boston to employ you?
- A. No, sir.
- Q. Where did he employ you?
- A. I think it was Field & Converse or Bigelow & Banks—I am not sure which—wrote to me to go.
- Q. Didn't you make a contract in writing, before you left South Boston, to go to Troy?
- A. No, sir; a contract might have been made; any contract at all I made, I think I made with Stone after I got to Troy.
- Q. You didn't know what you were to do after you got to Troy?
- A. I knew it was every thing in the mechanical line except manufacturing goods.
- Q. Did you expect to go into manufacturing iron rollers?
- A. Yes, sir; I knew we should want them.
- Q. Did you know any thing about the rubber business at all?
- A. A little about it.
- Q. Haven't you said you never saw any?
- A. I didn't say I never saw any; I have seen a little of it. I was let into the secret of it.
- Q. Who was the man?
- A. I don't know his name.
- Q. Where was it?
- A. At Roxbury.
- Q. About what time?—in the spring of 1833?
- A. I might so consider it, I think—something there.
- Q. Then you went on to Troy?
- A. Yes, sir.
- Q. What time in the year 1835 did you go?
- A. In August, 1835.
- Q. Was there any building up then for business?
- A. No, sir.
- Q. Did you go to work to put up one?
- A. Yes, sir.
- Q. What time did you get it erected?
- A. I think in November.
- Q. Had they any machinery when you got the building done?
- A. Only what I had ordered myself.
- Q. You had ordered this wooden machine?

- A. Yes, sir; and the iron one too.
- Q. The two rollers you have described; had you ordered these in November, 1885?
- A. Yes, sir; before that.
- Q. Haven't you sworn that you didn't order them till the spring?
- A. No, sir—what did you say?
- Q. You say you ordered two iron rollers?
- A. I ordered them just about as soon as I commenced building.
- Q. When did you go to Philadelphia?
- A. In September, I think.
- Q. Before you commenced the building?
- A. I commenced the building in August.
- Q. Did you order the machines before you went to Philadelphia?
- A. I did not.
- Q. How soon after you came back?
- A. I cannot remember exactly. It is eighteen years since, and I never dreamed of being questioned upon the subject, and have forgotten almost all I knew about it.
- Q. Mr. Stone has helped you what he could by talking it over with you?
- A. No, sir.
- Q. Hasn't he talked with you pretty freely?
- A. I do not know; he stated what he remembered, and I told him what I remembered.
- Q. Didn't he tell you what he remembered?
- A. He didn't remember as much as I did, because he didn't do the work, and I did.
- Q. You say that some time in the fall you ordered this machinery?
- A. Yes, sir.
- Q. What time did you first get it into the factory?
- A. I do not know whether it was in December or January.
- Q. You don't remember whether the first of any kind was introduced in December or January, 1885 and '6?
- A. I cannot remember the time that we began to turn out cloth, but I think it was in December. But I am not sure; I know that one thing delayed us; I know that our engine got frozen up in the river, and they had to bring it up with a team from some certain point.
- Q. That was in the winter before you commenced?
- A. That winter was a hard winter.
- Q. Then you had a wooden machine for grinding it in?
- A. Yes, sir.
- Q. Then you put in solvents?
- A. Abundance of them; the only time I was drunk was from that spirits.
- Q. You got drunk a good many times since?
- A. Never; I got so drunk in that way that I couldn't walk.
- Q. How long did you continue to stir it up with this machine?
- A. I cannot remember—till February or March, 1886.
- Q. Then you got your iron rollers?
- A. We hadn't got the rollers to that perfection that we did after this heavy machinery.
- Q. Who cast these rollers?
- A. A part of them, if not all, were cast by Starbuck, of Troy.
- Q. West Troy?
- A. Yes, sir.
- Q. Any at East Troy?
- A. Yes, sir.
- Q. What mechanics finished up the rollers and put on the gearing?
- A. In those times we didn't let every body know what we were doing.
- Q. You kept it as a secret?
- A. Partly.
- Q. Did you entirely.

- A. Except to certain individuals.
- Q. Except you and the doctor?
- A. What do you mean by doctor?
- Q. Didn't you have a doctor there?
- A. No, sir.
- Q. The doctor hadn't come?
- A. The doctor hadn't come.
- Q. Who did this iron work?
- A. There was some considerable of it done at Starbuck's.
- Q. What mechanics came over to the factory when the rollers were put up and did the work?
- A. We would have sometimes one man to do one thing in one place, and another man to do another thing in another place, and then somebody else would put it together.
- Q. Do you recollect the name of any man that did any part of one thing?
- A. I do not know but what I could remember. There was Starbuck did part; a man by the name of Nutting, or something of that kind, did something else, and a man by the name of Mann did a great deal.
- Q. Do you know where Mann lives now?
- A. I don't know whether he is dead or alive.
- Q. Did you know a man by the name of Benjamin P. Cushman at that time?
- A. I don't know but I did; I don't remember.
- Q. Do you remember a man named John Kerr about that time at the factory?
- A. I do not.
- Q. Do you remember that Butler was there?
- A. Yes, sir.
- Q. Do you remember a man by the name of Thaddeus B. Bigelow?
- A. Yes, sir.
- Q. Did he have access to that machinery?
- A. I don't think he had.
- Q. Did Butler have access to it?
- A. Not the least part of it.
- Q. How many weeks were these rollers in there before the factory was burnt?
- A. I cannot tell.
- Q. Will you swear they were in there four weeks?
- A. I will not swear to any particular time; it is so long since that I cannot remember.
- Q. You do recollect that at some time you found out you could grind rubber with less solvent, and then without any?
- A. I know we experimented three evenings, and that when we were trying to dissolve it we ground rubber without solvents—we manufactured lightning very fast.
- Q. Did you ever grind any rubber and spread it on to cloth for manufacturing purposes and make goods in that factory, without a solvent?
- A. I didn't make any goods.
- Q. Did any body?
- A. I presume they did.
- Q. Do you know they did?
- A. I knew I made cloth—tried the experiment, so that it would work.
- Q. Did you make one piece of cloth without a solvent?
- A. Yes, sir.
- Q. What was done with the goods?
- A. I expect it was used in these cartridge boxes.
- Q. How early did you fix the time you made it without a solvent?
- A. I would not fix the date, because if my memory serves me right our engine was brought up the first of January, 1836, and it was only from that time till May before the building was burnt.

- Q. You kept it so secret that Mr. Bigelow didn't know about it?
- A. The first ones.
- Q. These third rollers you didn't let any body know about?
- A. These third rollers.
- Q. Did you let Sylvester Norton know about it?
- A. I don't remember ever seeing him in the mill.
- Q. You saw Bigelow there?
- A. He never went into the working rooms that I know of.
- Q. Didn't Bigelow and Norton and Cashman own the whole concern?
- A. No, sir.
- Q. Who else owned any part of it?
- A. If I was informed right, there were quite a number that owned stock.
- Q. Name another?
- A. Field & Converse owned a portion of it, unless I am deceived.
- Q. Charles F. Mann was a machinist?
- A. He was there a part of the time.
- Q. You say he had a great deal to do with this business?
- A. He was an engineer.
- Q. Did he ever see these two rollers?
- A. I presume he did.
- Q. Did he have access to that room?
- A. I think he did.
- Q. Did you let him know that you ground some rubber without a solvent?
- A. I don't know whether I did or not.
- Q. Did you do that grinding yourself?
- A. I experimented there.
- Q. Who was there with you when you ground without a solvent?
- A. There was a man by the name of Gile.
- Q. What was his other name?
- A. I cannot remember.
- Q. What was his business in the mill? What did he do?
- A. He put rubber on the cloth.
- Q. Was any body else with you?
- A. I don't remember.
- Q. Was it in the evening or daytime?
- A. In the evening most always.
- Q. How many evenings did you make without a solvent? Will you swear to four?
- A. Yes, I think more than that.
- Q. This you are satisfied was some time in the spring of 1836, before the fire?
- A. After the machine was in operation.
- Q. You made large quantities of goods for the United States; do you recollect the date?
- A. I cannot; I know the order came before we got the engine up.
- Q. Did the whole of the goods you made and sold to the U. S., amount to two hundred dollars worth?
- A. I do not know; I understood it was more than that.
- Q. You have no knowledge about it? Didn't you know they were all made with camphene?
- A. No, sir; not all of them. I never saw the goods delivered; I don't know what they put on them after they were put together; it appears to me they put something.
- Q. Those four nights that you were working, you made goods that went to the Arsenal?
- A. It was not my business to work; I had other business.
- Q. You didn't know whether any camphene was used?
- A. No, in part of them.
- Q. Did you at any other time?
- A. I didn't know how much we put on to the cloth.

Q. Did you know at any other time than when you made your experiments, of goods being made without a solvent?

A. I know Gile told me he had made it.

Q. Did he tell you so that evening you were there?

A. He boarded in my family.

Q. Did he tell you he had done it?

A. He told me he had done it.

Q. Before you did it did he say so?

A. We did it together; he and I experimented, and he told me he had done it.

Q. That first night you were experimenting how much rubber did you grind up without a solvent?

A. I can't remember.

Q. Can you swear to five pounds?

A. It must have been more than five pounds.

Q. More than ten?

A. I don't remember.

Q. Whereabouts in the building did the machine stand?

A. It stood, perhaps, 80 feet from the engine.

Q. Was it in an open building, or had it a number of rooms?

A. Several rooms.

Q. How many rooms on the lower floor?

A. Three, I think.

Q. Was there any thing else in the room where the machine was?

A. I do not remember; I believe the cutting knife was there; I am not sure.

Q. Right over these rollers wasn't there another large machine?

A. I didn't see another there.

Q. You didn't see another standing directly over this, a machine into which the rubber went first, before coming down upon these rollers?

A. No such machine that I saw.

Q. Did you spread the rubber with the same rollers that you ground with?

A. Yes, sir.

Q. When you got them made they were for spreading?

A. To use as calenders when we first started, and nothing else.

Q. You used them for spreading, when you first got them, only?

A. For spreading when we first got them.

Q. Then you tried some experiments to see how you could succeed in grinding rubber without a solvent?

A. That was the way it was done.

Q. Did you talk much about it?

A. Mr. Gile and I had considerable conversation about it.

Q. You kept it pretty still?

A. We did not want to let every body know it.

Q. You did nothing after the factory burnt up?

A. I did nothing with rubber.

Q. You never heard any thing about this machine since?

A. They bought one at Boston before the new factory was built; they brought one on from Boston.

Q. A Hoyt machine?

A. A Hale machine.

Q. Were you there when that came?

A. I was there; I never took any interest in it.

Q. Were you employed after the factory was burnt at all?

A. I had charge of building a new one.

Q. For the new company?

A. No, not the new company, but the same company.

Q. Do you mean to say it was the same company?

A. I mean to say it was the same.

Q. That you are satisfied of?

- A. That I am satisfied of; that is, the same men employed me and paid me.
- Q. A new machine was brought there?
- A. Soon after the factory was burnt.
- Q. Did you put that up?
- A. I had nothing to do with it.
- Q. Who put that up?
- A. Mr. Hale came on with it himself.
- Q. Did you change your position?
- A. I was building in the city at the time.
- Q. Why didn't you tell them of your discovery so that they might use it?
- A. I wanted to put in a machine there.
- Q. Wouldn't they let you?
- A. There was a division in the council, because they found this man Hale came on, and they made a bargain with him. I don't know any thing about what the bargain was; I know the machine came.
- Q. Did you tell them what benefit you would be to them if they would let you make a machine?
- A. No, sir.
- Q. Were these rollers burnt up?
- A. They were burnt.
- Q. Destroyed?
- A. They were spoiled.
- Q. What became of them?
- A. I never knew.
- Q. Will you swear that they were more than six inches in diameter?
- A. Yes, sir.
- Q. Ten?
- A. Yes, sir.
- Q. How large do you make them?
- A. Two feet; I know they were over 18 inches. I know they were amazing heavy because I lifted hard to lift one end once.
- Q. Was any body lifting on the other?
- A. No, sir, I didn't want any body else.
- Q. You found you could not lift it?
- A. I don't know now whether I did or not.
- Q. Was there any manufacturing done for that company from December 1838 till the factory was burnt, except what was done in the factory building?
- A. I do not remember, because I have got rather a confused idea about part of it. I know I fixed up something in a barn they owned—a tremendous great barn. I cannot fix the time when that was; but I believe there were no goods (there might have been some) turned out there till in December.
- Q. After the engine came were not all the goods made in the factory?
- A. I believe so; I didn't know of any other.
- Q. How many hogsheds of turpentine were there when you first got the factory up?
- A. I do not know.
- Q. How many were burnt up?
- A. I do not know; 50 or 60 I think.
- Q. A grand explosion?
- A. A glorious fire—something like \$3,000 worth of rubber; I don't know the amount of spirits; it was a large amount.
- Q. They were constantly ordering spirits?
- A. I don't know; I know it came very often.
- Q. Now sir, upon your oath will you really state from positive knowledge that you know that that engine was put in there before April, 1836?
- A. Certainly; yes, sir.
- Q. You will fix the date when it was put in running order before April, 1836?
- A. I must be awfully deceived if it was not in operation in January. That

is as near as I can remember; I do not pretend to be exact, as if it occurred a few months ago.

Q. I want to know if you will say positively that you have such a recollection as now to enable you to say that it was put in operation before the 10th of April, 1886?

A. My memory must be very treacherous if it was not in operation three months in all before the fire.

Q. When was the fire?

A. The last of May, if I remember right.

Q. You made some goods before you had the engine?

A. That is what I was trying to remember; I do not know whether we did or not; I knew we ground some stuff at the mill.

Q. Who was that man you talked with at Roxbury? Where does he live now?

A. I do not know.

Q. What was his name?

A. I am troubled exceedingly to remember names; I can remember facts and things better.

Q. You remember you had a talk with somebody at Roxbury in 1885; but you don't remember who it was?

A. I don't remember; if I did, I would tell you.

Q. Did you get into the Roxbury factory?

A. Yes, sir.

Q. Did you see any machinery?

A. Nothing but this wooden machine.

Q. Nothing else at Roxbury?

A. And the manner in which it was put in.

Q. You didn't go into the secret rooms?

A. I saw no kind of machinery but the wooden machines.

Q. You saw one man there, and he told you something?

A. Yes, sir.

Q. Was it Chaffee?

A. No, sir.

Q. Butler?

A. Butler I didn't know.

Q. Bigelow?

A. No, sir.

Q. Dexter?

A. No, sir.

Q. That was all you knew about the rubber business when you went to Troy?

A. That is all I knew.

Q. Every thing you knew about it was what you got there?

A. Mr. Gile worked at the factory, and he understood—

Q. At what factory?

A. At Roxbury.

Q. And he went on to Troy with you?

A. Some time after.

Q. And he helped you to make these experiments?

A. Certainly he did.

Direct resumed by Mr. Bradley.

Q. What was this secret you got at Roxbury?

A. This wooden machinery.

Q. Just describe it to the jury?

A. It was a cylinder of wood—I forget the length,—something like two feet or two and a half long; it went round in a frame of wood, with slats or strips.

Q. Which way did it stand?

A. Perpendicular.

- Q. What was there around it?
 A. A frame, and then wooden slats for the rubber to come through.
 Q. That was all the secret you got at Roxbury?
 A. And the manner of mixing it and putting it on to cloth by these long frames.
 Q. A perpendicular wooden roller, with these slats; did you see any machine there like these horizontal cylinders, revolving upon one another?
 A. I did not see any.
 Q. Did you hear of any?
 A. I heard that there was a gentleman experimenting, but I didn't know who it was.
 Q. And didn't know what he was experimenting upon?
 A. No, sir.
 Q. You said you tried some experiments of grinding rubber without a solvent; how soon was it after the machine got into operation?
 A. I cannot answer that. If I had known I would ever have been called upon in this way, I should have kept it in my mind.
 Q. Was it after you tried this experiment that Gill told you he was doing it there?
 A. Yes, sir.

Re-cross-examined by Mr. Richardson.

- Q. Did Gile tell you he had done it more than once?
 A. I do not know as he did; I don't remember how much conversation we had.
 Q. You said you recollected his once saying to you that he had done it when he was alone?
 A. That was making cloth.
 Q. He had made cloth?
 A. He had made cloth that way.
 Q. Did he say one piece?
 A. I do not know how much.
 Q. (By Mr. BRADLEY.) Which suggested this experiment—you or Gile?
 Mr. RICHARDSON. That is not competent in this stage of the examination; it does not grow out of my cross-examination.
 Mr. BRADLEY. They brought out the fact that Gile was experimenting. The COURT ruled the question as proper.
 WITNESS. I don't remember which it was, perhaps it was Gile, and perhaps it was myself; I do not profess to be a machinist.
 Q. (By Mr. BRADLEY.) Nor a manufacturer of rubber?
 A. No, sir.

Adjourned.

TWENTY-THIRD DAY.

PROVIDENCE, *Tuesday, Feb. 20, 1855.*

TESTIMONY OF FORD, CANDEE, HORSFORD AND JUDSON.

The Court having ruled out the papers offered yesterday, and the defendants not producing the originals as they were notified to do, the counsel for the plaintiff proceeded to call witnesses for the purpose of identifying the papers.

JOHN R. FORD, SWORN AND EXAMINED BY M R
RICHARDSON.

Q. (Handing him a paper.) Did you ever see the original paper of which that purports to be a copy?

Mr. BRADY objected. They might put the defendant, Dr. Hartshorn, on the stand, and ask him in reference to the paper, but he objected to this secondary evidence of another party as to whether he ever saw the original of such a paper. Besides, they must produce the subscribing witnesses, and prove the paper.

Mr. RICHARDSON quoted authorities showing that subscribing witnesses were not required where the papers came incidentally in the course of the trial. As for calling Dr. Hartshorn, he would give no more for his oath than for the word of his counsel.

The COURT. It appears to me that this paper is in its nature collateral, it is not in a direct title. The defendants do not claim a license under it, nor does the plaintiff. It is merely to show the transactions of Judson in the execution of this power. I think they have a right to ask this question, whether this paper ever existed; but whether they must produce the original itself is another question—whether they can undertake to prove a paper, by producing the copy is another question. I don't think it is necessary to produce the subscribing witnesses, but if it can be proved, when the original is brought here, it can be authenticated by other testimony.

Mr. BRADY took exception to the ruling.

Q. Answer the question now?

A. I think I have seen something very similar to this.

Q. The paper was an agreement to give a license signed by Judson and the associates, dated May 25, 1853.

Q. Where did you first see it?

A. At Judson's office.

Q. When?

A. I do not know that I could state certainly; I suppose about the time it was written.

Q. Did you send it to be recorded?

A. Yes, sir.

Q. Did you send it yourself?

A. Yes, sir.

Q. Have you ever got it back again?

A. Yes, sir.

Q. Where is it now?

A. I think I sent it to Mr. Candee.

Q. Was he present when you saw it at Judson's office?

A. I think he was.

Q. You think you sent it by Mr. Candee to be recorded?

- A. No, sir, I sent it by mail, and sent it by mail to Mr. Candee.*
Q. After you got it back?
A. Yes, sir.
Q. Have you seen it since?
A. I don't think I have.

MR. CANDEE, RE-CALLED AND EXAMINED BY MR.
RICHARDSON.

Q. Have you the original of which this is a copy?

A. No, I believe not.

Q. Where is it?

A. I cannot tell you.

Q. Did you receive it by Mr. Ford in a letter?

A. The original?

Q. Of which this is a copy.

A. It is possible I did, but I do not know at this moment.

Q. Did you have it at the time the motion for an injunction was heard against you in Connecticut?

A. I believe it was among the papers.

Q. Who had the custody of the papers?

A. Mr. Baldwin had them; some were in my possession; I cannot say but that is in my possession now.

Q. Haven't you seen it since this trial commenced?

A. No, sir.

Q. Haven't you delivered it to Mr. Judson?

A. No, sir.

Q. To Mr. Brady?

A. No, sir.

Q. Not at any time?

A. I do not recollect of delivering any papers during this trial.

Q. At any time have you delivered it to them?

A. I have no recollection of it.

Q. And you don't know where the paper is?

A. I do not; I don't know but it is among my papers; I don't know but it is in New Haven, and I don't know but it is in my carpet bag; I cannot say.

Q. Look at that paper (handing him another paper), and tell us where the original of that is?

A. This is the Malden license; it is in the same predicament as the other.

Q. What predicament is that in?

A. I cannot tell you whether it is in my possession or whether it is not?

Q. Does not the custody of it belong to you?

A. If it belongs to me it is among the associate papers, which are probably now in New Haven, but I cannot say; I do not think I have ever read this license through.

Q. You signed it without reading it?

A. I should think I did; can't say particularly.

Q. Don't know but you did read it?

A. I don't know but I have; I have not any particular recollection of it now; I know there is a Malden license.

Q. And that you have had the custody of it, haven't you?

A. I cannot say that distinctly.

Q. Don't you know it is in your valise now at the hotel?

A. No, sir; I do not.

Q. You may go and see?

A. I didn't look in it.

Q. Will you go and look in it?

A. Yes, sir, if you will go with me.

Q. I will take your word for it when you get back?

A. I would like your company; I have no objection to going to look and see.

The Witness then proceeded to the hotel; and, in the mean time, the counsel for the defence called and examined Mr. Horsford, after which the witness again took the stand.

Q. Have you got those papers?

A. I have the papers which I have brought with me.

Q. Have you found the original?

A. I expect that is it (producing it from the bundle).

Q. Was that executed in your presence?

A. I cannot say; I am not a witness to it.

Q. It is in the handwriting of Judson, is it not?

A. I should think it was.

Q. Was that the original paper delivered to you?

A. It appears to be.

Mr. BRADY objected to the reading of the paper, as irrelevant.

The COURT permitted it to be read.

Mr. RICHARDSON read the paper, being the agreement to license certain parties, dated May 25, 1853, recorded July 11, 1853, in which Judson claims that the title of the Chaffee patent is vested in him.

Q. Did you find the original of the other paper?

A. No, sir.

Q. Have you made all the search you can for it?

A. Yes, sir; I have made all the search I can in Providence for it. There are all my papers that I brought.

Q. You haven't got it?

A. I cannot find it among them.

Q. Did each of you have a copy of the Malden Company paper?

A. I cannot say.

Q. Were there not several copies made?

A. I do not know that there was one copy made.

Q. Do you know that there was ever such a license given?

A. I suppose there was.

Q. Didn't you sign it?

A. I think I did; (looking at the paper) I should think very probably I signed the license.

Q. You don't know where the paper is?

A. No, sir.

Cross-examined by Mr. Brady.

Q. In what capacity did you receive these papers and have the custody of them?

A. In the capacity of trustee of the shoe associates.

Q. These papers always remained in your possession?

A. I presume so; when I was appointed successor to Mr. Ackerman, I believe the papers were handed over to me.

Q. Have you kept personal possession and control of them?

A. Those that were delivered to me from Mr. Ackerman were kept in my possession.

Q. And during this trial you have kept all these papers yourself; have they been out of your possession to any body?

A. These? Not at all.

MR. HORSFORD RE-CALLED AND EXAMINED BY MR.
BRADLEY.

Q. Please to state whether you went with Mr. Durant to make any experiments in regard to the application of rubber to cloth.

A. I did go.

Q. State the purpose, and how the experiment succeeded.

A. I went with the understanding that I was to see cloth spread on both sides with rubber in the Chaffee machine, the rubber upon the slow roller. We went first to Dr. Hartshorn's factory, and witnessed the spreading of rubber upon both sides of the cloth by the ordinary process—the rubber upon the fast roller. We then witnessed an effort to spread cloth, the rubber upon the slow roller, which effort was unsuccessful. The specimens of cloth so spread, or attempted to be spread, are in the court room. We then went to Messrs. Bourn & Brown's establishment, where Mr. Chaffee's machine was erected, and witnessed, as was announced to Mr. Chaffee by my associate, first a repetition of the experiment made at Dr. Hartshorn's establishment, and then various other experiments.

MR. RICHARDSON (to witness). You say the first experiment performed was that witnessed at Dr. Hartshorn's?

WITNESS. That was a proposition of Mr. Durant's.

MR. RICHARDSON. I don't want to know what Mr. Durant's proposition was, but what was done.

WITNESS. After some considerable time—some four hours—we succeeded in the experiment of spreading cloth on both sides with rubber; the rubber upon the fast roll was successful. At that point I expected to witness, according to the understanding, an effort to spread cloth, the rubber being upon the slow roll. That experiment I was not permitted to witness. It was proposed at that stage, and contrary to that understanding at the outset, that there should be an experiment made to spread cloth with even motion; to which I objected as a waste of time, and as not falling within the objects which had been assigned to us.

Q. What hour of the day or night was it then?

A. It lacked about 20 minutes of 9. We had then been from half past 9 or a little before 10 in the morning, in accomplishing what we had done, and at that point I left.

Q. Mr. Durant had tried to spread rubber from the slow roller upon cloth, and had not succeeded. Was Mr. Stoddard at Chaffee's factory?

A. I do not know Mr. Stoddard.

Q. Mr. Chaffee and Durant were there?

A. Yes, sir.

Q. Did you propose to them to apply rubber on the slow roll?

A. I did.

Q. And they declined, or did they not?

A. They, at the close of the first experiment, insisted upon performing an experiment with even motion, when I had been given to understand by the programme of Mr. Durant, in our first moment's interview with Mr. Chaffee, that our second experiment would be to spread cloth with rubber on the slow roller.

Q. Describe more minutely the precise mode of performing the process that Mr. Durant failed in?

A. At Dr. Hartshorn's factory we attempted to spread cloth, the rubber being on the slow roller.

Q. (By Mr. RICHARDSON.) Who tried it?

A. He did not; he did not any where.

Q. (By Mr. RICHARDSON.) Who was it failed at Hartshorn's?

A. I failed in the attempt to spread cloth, the rubber being on the slow roller.

Q. Did Mr. Durant decline to undertake any such experiment any where, and did you request him to make such an experiment?

A. I attempted with such address as I had to accomplish the fulfilment of that experiment. The sole object, I understood, of the experiment that was to be witnessed by us was to see whether it was possible to spread cloth on both sides, the rubber being round the slow roller. I gave 12 hours to that end and did not witness it.

Q. You wanted to get Mr. Durant to try to do it?

A. And I could not.

Q. Was not that the precise experiment which, in open court, you and he were appointed to see?

A. Such was my understanding.

Q. Now, sir, please explain these two processes more minutely to the jury.

A. By the process described in Chaffee's patent, the rubber is placed upon the slower moving of the two rollers, the cloth in contact with the fast one. By the process pursued by Dr. Hartshorn in spreading the cloth upon both sides, the rubber is placed upon the fast moving of the two rollers, the rollers having unequal motion. The rubber moving faster than the cloth there is no tendency to an accumulation of the cloth and folding of it between the rollers. The cloth moving faster than the rubber, tends to fold the cloth upon itself, and these folds of the cloth, coming into the bite of the rollers, making the thickness greater than the space between them, are cut in two. Hence it is impossible to spread cloth, the rubber being upon the slower of the two rollers.

Q. Have you a specimen of these different attempts?

A. (Exhibiting a specimen.) That illustrates the effect of the cloth being folded upon itself: the covered up portions of the cloth preventing the rubber from coming in contact. The cloth moving faster than the rubber, folds it and clogs up the spaces between the rollers, and they being hard and irresistible, and the cloth being soft and yielding, the cloth is cut in two—clined off. Here is another piece (exhibiting it), clined off, and here is the portion clined off (referring to some strips).

Q. Have you applied the dead oils of coal-tar to rubber?

A. Yes, sir.

Q. With what effect?

Objected to as matter which the defendants were not allowed to rebut. Objection sustained.

Cross-examined, by Mr. Richardson.

Q. What time did you go to Hartshorn's factory with Mr. Durant?

A. We left here at the opening of the court, and I suppose we reached there in about 10 minutes.

Q. How long did you stay there to make your experiments?

A. The experiments performed under my direction consumed about one half or three-fourths of an hour.

Q. How long did you remain there?

A. The preliminaries to these, which I did not attach so much importance to as my associate, consumed the balance of the time, between about a quarter to 10 and 12 o'clock.

Q. Who directed these experiments?

A. I did.

Q. The whole of them?

A. Yes, sir; so far as the spreading was concerned.

Q. Who aided you in getting your information about it?

A. The spreading of the cloth?

Q. Whatever you did there, so that you could do the business.

A. Shall I give you all the sources of information that bear upon that point?

Q. Did Dr. Hartshorn give it to you or men in his employment?

A. I will state that I have visited the Malden manufactory I suppose fifty times in my life, and witnessed the process of spreading cloth there. I have been in Dr. Hartshorn's, I suppose, a dozen times in the course of the last year or two.

Q. You acted then upon your own knowledge?

A. Yes, sir.

Q. Not upon the suggestion of Hartshorn?

A. Dr. Hartshorn was not a witness then.

Q. I am not asking you about his being a witness, but whether he told you how to do these experiments?

A. And further, he did not instruct me.

Q. When was it and where that you got your understanding that you spoke about as to what you were to do after you went to these several places?

A. I got it from the discussions that arose in the court room.

Q. In the presence of the court?

A. In the presence of the court, and from the more particular conversation that arose between yourself and Mr. Bradley at the conclusion of it.

Q. Don't you know that after you got ready to leave the court house, after the court adjourned, you and Durant and Hartshorn stopped me; that you had got into a misunderstanding in relation to what the understanding was in the court room; and that besides us four nobody but Mr. Bradley was present?

A. Yes, sir.

Q. Don't you know it was there said for the first time that you had heard it, that Durant might go to Hartshorn's factory first with you?

A. I did understand that there was opposition to his going there.

Q. Didn't you understand that then they said he might go first with you to Hartshorn's factory, and that the opposition was yielded?

A. I will tell you the impression with which I went next morning; but with regard to that precise conversation, I should fail to give you a precise answer.

Q. Don't you recollect that Durant called me as I was going out of the door to come back?

A. Distinctly.

Q. And that he said to me this: Shall I go to Hartshorn's factory with Prof. Horsford?

A. I think I do.

Q. And don't you recollect my answer:—You may go to Hartshorn's factory and see what they do there and then attempt to do on the Chaffee machine any thing that you see done there?

A. I think you probably said it, though it didn't make much impression upon me—not enough to enable me to recollect it now.

Q. You do recollect it?

A. No, sir, I do not.

Q. Don't you recollect that Durant said to me, What I am to do is to do precisely what they are to do at Hartshorn's factory?

A. I did not quite understand that; I did suppose that it was the distinct purpose—I certainly should not have gone if I supposed that I was to be tricked—I supposed there was to be a *bona fide* offer to spread cloth by the Chaffee machine, the rubber on the slow roller.

Q. You didn't suppose you were to be tricked?

A. I did not.

Q. Didn't you understand distinctly that agreement, that he was simply to do on the Chaffee machine what you did on the other?

A. By the Chaffee process was my distinct understanding.

Q. Was there any thing said except to do precisely on the Chaffee machine what you did on the Bickford machine, and in the same way?

A. It is very possible the language was so framed that it would bear that construction; yet I expected, especially when under Durant's direction, to see the attempt to spread cloth with the slow roller.

Mr. BRADLEY said he would like to refer to the reporters' minutes to see what was agreed upon in open court.

Mr. RICHARDSON said that he understood it to have been denied that the specimens which Mr. Durant had brought into court were spread by the Chaffee machine at all—that it was considered as a cheat and an imposition upon the court.

The Court. It is not worth while to argue upon that point now, but in the summing up before the jury.

Q. What time in the day did you go to Chaffee's factory?

A. We reached there very nearly a quarter past 3 in the afternoon.

Q. Where did you go from?

A. From the City Hotel.

Q. You carried some cloth and gum from Hartshorn's didn't you?

A. Yes, sir.

Q. It took some time to adjust the machinery and get the rollers at a proper temperature, didn't it?

A. It took some time to get them at the proper degree of heat and cold.

Q. Finally he spread the two sides of the cloth precisely as they were spread at Hartshorn's?

A. So far as the motion of the rollers was concerned and the position of the rubber and the cloth.

Q. And so far as the result was concerned was not that the same?

A. The reason why I hesitate at all is simply that I am not a process-expert; but so far as the philosophy is concerned, I did not see any difference.

Q. Did you see any difference in the result?

A. I don't think there was.

Q. Then didn't Mr. Durant say to you, the rubber being on one roller he wanted to proceed to make an experiment with the other two rollers in the other form? What was the experiment he proposed to make?

A. The spreading of cloth between rollers of even motion.

Q. What was the position of the rubber at that time?

A. It was on the second roller from the bottom—the middle of the three.

Q. It coated the roller?

A. Yes, sir.

Q. Didn't he say he could then proceed at once and spread with the even motion on account of the position of the rubber without taking it off?

A. Yes, sir.

Q. Didn't he say that as soon as he had got that done he would at once make an experiment to spread with rubber on the slow roller?

A. Yes, sir.

Q. Didn't you decline to remain there because he would not make that experiment first?

A. For the simplest reason—that he had previously engaged that that experiment should be performed second, and on the failure to fulfil that engagement, and the consumption of nearly five hours of time to accomplish that.

Q. It didn't consume five hours after you got your machinery adjusted, did it?

A. In the various experiments that resulted in it, I mean.

Q. Didn't you leave that factory offended?

A. Decidedly.

Q. Simply because you could not have the programme go on in the order you wanted it?

A. For the reason that I became persuaded—if you wish to know—that the parties who had the control of the apparatus didn't purpose to perform the experiment that had been the subject of our whole discussion; that is to say, with the rubber upon the slow roller. I did leave with that impression.

Q. Were you not told by Hartshorn after you left this court room to try to get them to spread the cloth with the rubber on the slow roller?

A. It is very possible; I certainly went with that understanding—that it was to be done. I went to Chaffee's with pretty nearly the chief if not the sole purpose, of witnessing the spreading of the cloth with rubber on the slow

roller. I have no doubt that Dr. Hartshorn expressed a desire to have it done.

Q. He desired to have that done?

A. I have no doubt; I should not be willing to say anything about it, but if I were to say anything I should say I should think he did.

Q. Will you state under oath that you heard one word in this court house about spreading rubber on both sides of the cloth, the rubber being on the slow roller?

A. I did so understand it.

Q. Did you hear it so said?

A. That is my impression.

Q. Who said it?

A. The conversation that resulted in my understanding took place between yourself and Mr. Bradley, and arose out of the difficulty in getting testimony upon that point from the witness on the stand. It seemed to me there was a very simple point at issue; the point was, two rollers of uneven motion, cloth and rubber. I was to witness in the Chaffee manufactory cloth in contact with the fast roller and rubber in contact with the slow; that was all there was about it—a very simple experiment indeed.

Q. (By Mr. BRADLEY.) That was the agreement before the jury?

A. So I understood.

Q. Were you here when it was made?

A. Yes, sir.

Q. Then you understood that to be the agreement here in the court house?

A. I did.

Q. The rubber was to be upon the slow roller on Chaffee's machine, and on Hartshorn's machine it was to be on the fast?

A. Nothing said about Hartshorn's machine.

Q. You put it on the slow roller when you first went down to Hartshorn's instead of the fast?

A. I went there, I understood, to comply with your wish, rather than with the understanding of the previous day, that there might be everything which should favor a fair exhibition of it so far as I could see.

Q. You say that you didn't expect they would ever do it; didn't Mr. Durant and Chaffee both tell you to wait and they would perform the experiment as soon as they had got the rubber off that roll?

A. Yes, sir, but my experience had modified—

Q. I don't ask you about your experience; didn't they repeatedly tell you they would make that experiment and that they could do it?

A. Yes, sir.

Q. Didn't they tell you they had done it, and could do it and would do it?

A. I don't remember their telling me that they had done it—it is possible—but that they would do it if I would wait their time; but as I had waited a long time, and as the prescribed programme by Mr. Durant had not been carried out in my confidence—

Q. Was there a programme made before you went?

A. There was a statement of what it should be.

Q. You took it down in order in your recollection?

A. Yes, sir.

Q. Not with a pencil?

A. No, sir.

Q. Number one was to spread on the fast roller?

A. The statement was very simply this: that we should perform the experiments made at Hartshorn's and then perform various other experiments. The experiments at Hartshorn's were, first, spreading cloth on both sides with the fast roller; second, an attempt to spread it with rubber on slow roller.

Q. Did Dr. Hartshorn follow you at all and have any conversation with you at dinner time, after the first experiment?

A. Yes, sir; that is to say, he came into the hotel while I was there.

- Q. Did he find fault with your being so long?
 A. I don't think he found fault; I think he expressed surprise.
 Q. Did he tell you not to be more than ten minutes?
 A. No, sir, but that we would not be longer than that, I think he said.
 Q. (By Mr. BRADLEY). What time did you leave?
 A. Between half past 8 and 9.
 Q. Didn't you say you was not more than two hours in Hartshorn's factory?
 A. I don't think I did.
 Q. Were you not there more than four hours?
 A. No, sir.
 Q. Nearly four?
 A. We must have arrived there a little before 10 and we left in the neighborhood of one; we consumed less than an hour in spreading cloth; the balance of the time was occupied with something else.

Direct resumed by Mr. Bradley.

- Q. Did Chaffee superintend this experiment at his factory?
 A. Yes, sir.
 Q. Did he heat and cool the machinery alternately, and if so, how?
 A. He heated the machinery with steam and cooled it with cold water.
 Q. How long did it take him to perform that one experiment that he succeeded in?
 A. In getting the rollers into what was conceived by them to be a proper adjustment, and in working the cloth on the folds, and finally producing the successful experiment, could not have been far from four hours I should think.
 Q. Will you state to the jury the difference between the operation of these two machines—the Hayward and Bickford machine—where the cloth was spread in the Dr.'s factory and the Chaffee machine?
 (Objected to as new matter.)

Mr. BRADLEY. It seems to me very proper that the witness should state the fact as to the mode in which the two machines operate—how far they resemble and how far they differ.

The COURT allowed the witness to describe the mode of operation—as to what he saw.

Q. State what you saw?

A. In the machine at Hartshorn's there were three rollers disposed horizontally—not vertically as these (in the model) are. The rubber is fed in between the first and second rollers of even motion. The middle roller becomes coated throughout with a jacket of rubber that adheres to it. The cloth passes over the third roller—passes between that and the rubber which coats the second roller. The second roller revolves more rapidly than the third; the rubber moving more rapidly than the cloth, there is no opportunity for the cloth to accumulate between the two. These are the essential features of the machine at Hartshorn's. In the machine at Chaffee's there are three rollers. The rubber was fed between the second and third. It was put on to the middle roller and fed between the first and second.

Q. Will you explain before you get through the process which cut the cloth in spreading it?

A. I described the process by which the cloth is coated in the regular way. In the second experiment which was made with a view to spread cloth, the rubber being upon the slower of the two rollers—which in the case we have considered is the third—the cloth moving more rapidly than the rubber, folds and comes into the bite—the narrowest space between the two rollers—and is cut off. When the rubber moves more rapidly there is no opportunity for that accumulation and folding of the cloth. In the Chaffee machine the rubber was fed between the first and second roller and the cloth was fed in on the opposite side between the second and third; so that the arrangement, so far as the

spreading of the cloth and the disposition of the rubber were concerned, was the same as in Dr. Hartshorn's. According to Chaffee's specification, the rubber is put upon the slow roller and the cloth upon the fast. ●

Mr. RICHARDSON. That is going into the specifications, and if it is allowed there will be a long cross-examination growing out of it.

Mr. BRADLEY. We will not go further.

MR. JUDSON RECALLED AND EXAMINED BY MR. BRADY.

Q. Were you present during any part of the time that Mr. Chaffee was cross-examined by Mr. Day, in the extension proceeding?

A. I was not; I left for Boston on Wednesday evening, I think, August 21, and returned from Boston.

Mr. RICHARDSON wished to know the materiality of the question.

Mr. BRADY said it was to contradict Mr. Chaffee, in reference to the first interview with him.

Q. Well, sir, you went to Boston on Wednesday, the 21st of August?

A. And I returned on the Monday evening following I think, and on Thursday, I went to Washington, and I never saw Chaffee till he arrived in Washington, the day after I arrived there.

Q. You had not seen Chaffee then, from the 21st of August till he arrived in Washington, the day after you?

A. I had not.

Q. You didn't go on with him to Washington in the same train?

A. I did not.

Q. When did Woodman arrive in Washington?

A. I think he arrived the day after Chaffee, or two days—I think the very next day.

Q. Did you have any conversation with Chaffee at Washington, in which the circumstances of Goodyear were spoken about in any way?

A. I do not think I had any conversation with Chaffee in regard to his contract with Goodyear, or in regard to any arrangement in reference to the extension, of any kind whatever—I have no recollection of any conversation whatever, until his arrival in New York.

Q. Did you ever tell him any thing about Goodyear being poor?

A. I did not.

Q. And that he would not carry out his agreement between himself and Chaffee?

A. I did not.

Q. Or any thing of the kind?

A. No, sir; nothing of the kind.

Q. And that you did not believe Goodyear would carry out his agreement or pay the expenses, or even the salary?

A. I did not.

Q. Or that he had exhausted his friends?

A. I did not.

Q. When did you return to New York from Washington?

A. I think on Friday or Saturday, the 30th or 31st of August.

Q. When and where did you first, after your arrival in N. York, see Chaffee?

A. I think the first interview with Chaffee was either at my office or at the hotel, where he stopped—which or where I do not distinctly recollect.

Q. Did you at that time say any thing of the kind, about which I have inquired before—about Goodyear having exhausted his friends, or any such thing?

A. I do not recollect the particulars of the interview with Chaffee, but the object of that interview was, to make an arrangement for the transfer of the title to the extension, and the result of the interview was an appointment with Chaffee to meet me at Mr. Staples' house.

Q. When?

A. In the evening, I think, of that day.

Q. Did you see him at Staples' house?

A. I think after that interview with Chaffee I instructed Mr. Staples to draw up an agreement, the draft of which has been presented here, which was produced at Mr. Staples' house, and which Chaffee ultimately refused to execute.

Q. When you met at Mr. Staples' house in the evening what was done?

A. Mr. Chaffee objected to making an agreement; the reason assigned, and the only reason, was his obligation to transfer the title to Mr. Goodyear. I insisted upon his obligation to assign it to me in trust for the benefit of those parties for whom I acted as trustee, and insisted very strongly that it should be done,

and was somewhat indignant that Chaffee did not do it, because he knew my relation to those licensees, and knew that I was the representative both of the licensees and Goodyear; but notwithstanding that he refused and left.

Q. Did he tell you in that interview any thing about his agreement with Goodyear?

A. Mr. Chaffee represented, at the house, what his agreement was, to Mr. Staples and myself, and he did not state that there was any other consideration than the \$8,000 recited in that paper, and I never knew or heard of any other consideration of any kind whatever, until the testimony of Chaffee, I think, given in N. York. I never conjectured that there was any other consideration whatever, and he never intimated or hinted to me that there was any other consideration whatever.

Q. Had you at that time seen the agreement of May, 1850, or any copy of it?

A. I never had; the first time that I heard or saw the agreement, or the copy, was, I think, when it was brought out on the other side, before Goodyear sent his original to Mr. Dorr, from Europe.

Q. After the extension?

A. O yes, sir; it was after the commencement of these suits by Mr. Day.

Q. You had never seen the agreement or a copy of it, or had any knowledge of its contents?

A. I had not to my knowledge; I acted upon the assumption that an agreement was made with Goodyear, and on Goodyear's statement to me that the agreement was made with Chaffee, and supposing that it was all right I went on with the proceedings at Washington.

Q. At Mr. Staples' house did you say any thing at all about security for the expenses of the extension?

A. I did not; I never suggested such a thing, and had not the remotest idea of getting any security for my own personal benefit of any kind whatever.

Q. Did you at that interview make any threat whatever to Chaffee of any kind?

A. I made no threats whatever, to my best recollection and belief.

Q. Did you say any thing about making him trouble, or that he must take the consequences?

A. I do not recollect any thing of the kind. I was very urgent, and insisted upon his doing it, and I have no doubt I exhibited a great deal of warmth and feeling, because I was certainly very indignant, because I was satisfied that Chaffee knew that Goodyear would approve of what I did.

Q. What reason did you assign to Chaffee when you did insist that he ought to execute that paper?—what is the whole reason that you assigned to him then and there?

A. I stated to Chaffee that I represented both these parties in interest for whom this extension had been got—was trustee for both, and the moneys expended had been moneys of the joint fund, in procuring the extension, and in my judgment, I was the most proper person in whom the title should be placed in trust, in favor of all these parties for whom I was acting.

Q. Chaffee having refused at that interview to execute that paper which was drawn by Mr. Staples, did you see Woodman the following day?

A. I think I did; I did, I am sure.

Q. Before you saw Woodman, after Chaffee's refusal, had you seen any of the licensees, and, if so, which of them, in regard to what had occurred at Staples' house and the taking of this paper?

A. Upon Chaffee's refusal to execute that paper, I concluded that it would be best to change the consideration which had been offered to Chaffee; feeling, perhaps, some little doubt in Chaffee on account of his refusal, I concluded that it would be best, for the purpose of making him interested in the patent—in sustaining it,—to pay him an annuity instead of paying him a consideration; and I consulted with the associates, Mr. Ford and Mr. Hutchinson, who, I believe, happened to be in town—or I sent for one of them,—and, upon consultation with them at my office, I stated to them that Chaffee had refused to execute the assignment to me in trust.

Mr. RICHARDSON objected to consultations with other persons than Chaffee as hearsay.

Evidence admitted, as relating to the question of fraud.

Q. You were speaking of your seeing the licensees, Mr. Hutchinson and Mr. Ford; did you name any other person?

A. Mr. Hutchinson and Mr. Ford.

Q. In New York?

A. In New York.

Q. After you had informed them of Chaffee's refusal at Staples' house to give this paper, what then was concluded upon? (I do not ask for the details of the conversation, unless they are wanted by the other side.)

A. They approved of the course which I advised, to pay Chaffee an annuity of \$1,200, and to have the title conveyed to me, in trust, for the benefit of Goodyear and his licensees.

Q. Was any agreement made there as to who should pay that amount to Chaffee, and how it was to be paid?

A. There was nothing said as to how it was to be paid; it was understood to be paid out of the fund of which I was trustee.

Q. (By Mr. RICHARDSON.) You have stated that there was nothing said?

A. It was taken for granted, I may say.

Mr. RICHARDSON. That is not proper testimony.

The COURT. That is his own inference.

WITNESS. As I had paid all the other expenses.

Q. In consequence of what occurred there did you go on to New Haven?

A. I think I then saw Mr. Woodman, and it is possible that I might have seen Chaffee; I cannot state whether I did or not, but Woodman went to New Haven, at my request, to see Chaffee; and I think I must have been informed through Woodman that Chaffee would accept the proposition; I think I must have been so informed, because the writing or agreement which I took with me to New Haven (I am quite sure I took it already drawn up with me to New Haven), included the consideration of \$1,200, which was written out in it. It is possible that that agreement may have been written at the hotel in New Haven, where I think I had an interview with Chaffee before an appointment was made to meet him at his house.

Q. Which of these papers was the one you wrote in the first place? (handing him the papers).

A. This paper (the one signed by Chaffee), I drafted and made it to correspond exactly with the original draft of Mr. Staples, in order to satisfy Chaffee; it was precisely the same except the consideration, which was \$3,000 in the original draft; this consideration was \$1,200, and was put in in place of the \$3,000, to make it correspond with the *habendum* clause, so to speak, in the agreement. In all other respects, I believe, it was precisely the same.

Q. Is that the paper you wrote first?

A. This paper I wrote first, saving that the last clause was added at Chaffee's house.

Q. That is about the right to personal use. When did you first see Chaffee in New Haven, according to your recollection?

A. I am not entirely certain; but I think my first interview with him was at the Tontine hotel, New Haven. I then saw, or had previously seen, Mr. Candee, and stated to him my interviews with Ford and Hutchinson, and he approved also of the course which I advised.

Q. Did you ever say to anybody, at any time, any thing about breaking up Chaffee in his business?

A. I never did.

Q. When did you first hear of any such remark as ascribed to you?

A. I never heard of it till I heard Woodman testify that I had so said on the trial at New York.

Q. Had Chaffee any business at the time that conversation is said to have occurred?

A. He was in Goodyear's employment at that time.

Q. Had he any other business?

A. None whatever that I knew of.

Q. When you went to Chaffee's house that night did you go alone or was any body with you?

A. I went with Mr. Candee, as a party interested in the matter.

Q. Did you before that confer with Mr. Candee about taking this title?

A. I had conferred with Mr. Candee, had read to him the paper which I had drawn up, or had stated to him what it was, and he went with me in the evening to make a complete arrangement with Chaffee.

Q. What did Chaffee say? what occurred about that paper between Chaffee, Woodman, Candee, and yourself?

A. Mr. Chaffee, I suppose—indeed, I know,—was informed by Woodman what the arrangement was to be; there was no objection—no objection whatever—to signing the agreement, except his obligation to convey it to Goodyear, and he assented to the arrangement, and agreed to execute the papers, and was satisfied, I supposed, with the arrangement.

Q. Was any thing said about that paper being to secure you for the expenses of the extension, or any thing of the kind?

A. Nothing whatever; no mention of security; no idea of the kind whatever.

Q. Was any thing said about your seeing the licensees, and seeing that they took their licenses under it, or any thing like it?

A. No, sir; nothing whatever. I had agreed with Chaffee, I may call it so; it was not a positive promise, but I afterwards did make it positive, if there was any doubt about it—that I would see the associates, and would add \$800 to his annuity, so that it should be \$1,500 instead of \$1,200. Chaffee having some apprehension about that, I ought to have said, that the papers being drawn, and it being too much trouble to write them over, I agreed that I would have the papers altered at another time in that respect, and that it should be so that he should have my obligation to pay him \$1,500 instead of \$1,200, as provided in the agreement.

Q. Was any other alteration proposed in that paper?

A. None whatever.

Q. About that last clause—for what reason assigned at the time was it added?

A. This last clause was not in the agreement as drafted by Staples. I did not understand that it was in Goodyear's agreement, but at Chaffee's house Chaffee said that it was part of the agreement of Goodyear, and it was added at his request at his house on that account.

Q. Was there any other reason whatever assigned for it?

A. None whatever.

Q. What was the agreement there made about the \$1500?

A. It was to be \$1500 in advance. I continued to pay the annuity regularly after the expiration of the first year, and my recollection was not distinct whether that annuity was to be paid as an advance on the first year, or whether it was on the whole term; but I am satisfied, after seeing Mr. Hutchinson, that his statement in that respect is correct, and that the advance was upon the whole term.

Q. The only question was, whether the payment should be made in advance, and then the payments go on till the last year, and leave that out, or the other?

A. I have no doubt the payments were in advance on the whole term, so that in the sixth year all the payments would be made—that it was not a bonus; and I am satisfied of that fact from the fact that I went on paying these instalments regularly; I cannot account for it on any other hypothesis.

Q. That seal on the paper you drew—was that put there at the time you drew it?

A. That seal was put on there by me on that evening before Chaffee signed his name to it.

Q. Was there any altercation, angry feeling, or angry word during any part of that interview?

A. If there was I am not aware of it.

Q. What was the nature of the relation between you and Goodyear at that time—the 5th of Sept., 1850?

A. My relation was the same that it had always been.

Q. Friendly?

A. I presume so—as friendly as it ever had been?

Q. In the whole of that transaction, from the time of the extension up to the execution of this paper, for whom were you acting?

A. For Goodyear and his licensees and myself, as a party interested, I being a licensee, and, in fact, having a partnership interest with Goodyear and the licensees.

Q. Did you act or profess to act as attorney and counsel of Chaffee in any part of that transaction?

A. I did not.

Q. Was any such thing mentioned or suggested to any body whatever in any interviews or transactions?

A. There never was.

Q. Had the relations formed between Goodyear and yourself in 1848 been in any way altered at that time?

A. They had not, except since 1848 I had, at Goodyear's request, become largely interested in his European patents. I had been over with him, first on his account, and then again subsequently.

Q. On the 28d of May, 1850, and 5th of September, 1850, in the relations that existed between you and Goodyear, did he act upon your advice and with your sanction, or had he any other advice?

A. He always followed my advice, I believe, in every instance, when I was with him where I could control him or advise him, ever since 1848, except in the single instance (I was not with him then) when he made a contract with Mr. Day, which he afterwards repudiated.

Q. Was there any thing said at that interview, or at any time, between you and Chaffee, meaning, or to the effect, that his name would be necessary in any license to any body?

A. Nothing whatever.

Q. Any thing resembling it?

A. Nothing.

Q. Did Mr. Goodyear come in there after these papers were executed?

A. My recollection in regard to that is indistinct. I think Goodyear drove up; to give my best belief and impression—because it is quite indistinct—he drove up to Chaffee's house that evening; whether he came into the room or not I cannot call to mind distinctly.

Q. When did you next see Chaffee after separating that evening at his house?

A. I next saw him, I think, at the depot, when Woodman left for Boston.

Q. Did you there receive the original patent from Chaffee?

A. I received the original patent at the house that evening.

Q. Was it given to you with any condition, absolutely or otherwise?

A. No condition whatever; it was delivered to me. The original patent sent to me by the patent office was in my possession; Chaffee was sent by me to get it out of the patent office.

Q. Was any thing said that night or the following day at the depot as to not making this thing known to Goodyear, or any reason for it, or any thing relating to it?

A. I did.

Q. At which place?

A. At the depot I requested Chaffee to give the agreement to Woodman, so that if Goodyear asked him for the contract, he could say he hadn't it—to my best recollection.

Q. And what reason did you state at the time, if any?

A. I knew very well that Goodyear's pride would be wounded by what had been done without consultation with him, and I wanted to explain the matter to him myself; rather than have it come from Chaffee.

Q. Was that assigned at the time as a reason to Woodman and Chaffee?

A. I do not know whether that was or not; I think that was assigned; the first that I gave was that he might not see it; whether I gave the other or not I am not certain.

Q. When did you first see Goodyear after that?

A. I saw Goodyear after that, I think, in New York next.

Q. About how long was it?

A. In the course of, I should think, two or three weeks.

Q. When you saw him, what course did he adopt about that agreement?

A. Goodyear thought that he was not treated quite right, but approved—

Mr. RICHARDSON objected.

Q. As to the fact, I ask you whether he accepted or refused?

Mr. RICHARDSON objected.

The COURT. I suppose it is to show whether Goodyear ratified it or not.

Q. How is that?

A. Goodyear approved what was done, and was satisfied with the explanation I gave.

Mr. RICHARDSON objected to such kind of evidence.

The COURT after hearing some argument ruled the evidence in, as bearing upon the question that a fraud was perpetrated on Mr. Goodyear.

Mr. RICHARDSON having stated, prior to the ruling, that he did not intend to argue fraud upon Goodyear to the jury, now withdrew that concession.

Q. State what Goodyear did in the way of assenting to it?

A. He expressed himself satisfied with the arrangement that had been made.

Q. Was it acted upon?

A. It has always been acted upon since.

Q. What was done?

A. Every thing that has been done under that agreement has been done to carry out the objects which Goodyear had in making the original agreement as far as I could understand, and according to his licenses and as the licensees had enjoyed their licenses under the original patent.

Q. Had Chaffee called upon you before the agreement of November 12th, 1851, was made, with a view to have such an agreement made?

A. Chaffee had written me and called upon me to have the agreement altered in the respect in which it had agreed to be altered at his house.

Q. In consequence of that did you prepare that paper?

A. I recollect when he called going with Chaffee to Staples' office; and I then, either before the interview with Staples or at the time, had stated to Staples what I proposed to have done in making the arrangement with Chaffee. I stated to Staples that Chaffee had objected to the agreement of September 5th, 1850, that I was not sufficiently personally bound to pay the annuity without I got it from the licensees.

Q. (By Mr. RICHARDSON.) Was Chaffee present then?

A. Chaffee was present at this interview at Staples' office. I then stated to Staples that I wished to accomplish a certain object that I had in view for certain purposes. I am not entirely certain that I stated it at that time in presence of Chaffee, but Staples knew the object I had in view in making this paper. The interview was broken off by Staples' saying that we had better come again when he understood more fully and deliberately just what I wanted to have done. I afterwards saw Staples and explained to him what I wanted, and the result was the drawing up of this agreement, in which there were certain covenants in which Chaffee had no interest whatever, the object of which was, to operate upon certain licensees who never had paid any tariffs to Goodyear or to me, although they had been manufacturing largely under their licenses, and were also infringing on the rights of the other licensees; the Boston Belting Company in particular was one that was intended to be affected by the arrangement.

Q. What did you explain to Chaffee?

A. I explained to him that in regard to the recitals and the other parts of

the agreement they were matters in which he had no interest whatever; it was intended to affect these parties and operate upon the licensees—the Boston Belting Company in particular—and he was satisfied with the provision in the agreement which affected him, and it was executed accordingly.

Q. Did you say any thing to him about any parties not having taken licenses?

A. I did not—nothing of the kind; I did not suppose any licenses were necessary to any of the licensees at any time.

Q. They have spoken of your license to the New England Car Spring Company, is that the original license to that company (handing a paper)?

A. It is.

Q. Did you receive any thing for that license?

A. I never received a dollar for this license.

Q. Were you interested in that company?

A. Yes, sir.

Q. In what respect, generally?

A. I was a stockholder in the company about that time or subsequently.

Q. Was Chaffee in the city of New York at or about the time that license was made?

A. He was.

Q. Where was the place of business of that company?

A. At 104 Broadway; my office was at 98 Broadway.

Q. Did you see Chaffee in that place of business of the New England Car Spring Company about the time that license was made or after it?

A. I saw him about the time the license was made.

Q. Can you state when Chaffee was first given a knowledge of the execution of that license?

A. I have no doubt whatever that he knew that a license was to be given to that company, although it was not mentioned as a matter in which he had any interest.

Q. Was one of these receipts to Mr. Candee as one of the associates for the payment on the advance of \$1125 drawn by Mr. Candee in your presence?

A. I have no recollection of that receipt ever being drawn in my presence.

Q. When the payment was first withheld from Chaffee in December, 1852, did Chaffee call upon you about the withholding of that payment?

A. Chaffee called upon me at my office some week or two perhaps after the payment was withheld, after the 1st of December, 1852.

Q. What occurred between you and him about that?

A. Chaffee seemed to have two objects in view in calling; one was to know why the instalment had not been paid, and the other was to know whether it was possible still to get a license to manufacture shoes for Bourn & Brown.

Q. Had he spoken to you upon that subject before?

A. He had; there had been a long negotiation before between us which was suspended when I went to Europe and taken up by Candee and Hayward.

Q. When did you go to Europe?

A. In July, 1852.

Q. And remained how long?

A. I was absent over three months.

Q. Without ever being within the United States during any part of the time?

A. Yes, sir.

Q. And you left that negotiation pending for the licensees?

A. Pending when I left. When I came back I inquired the condition of it, what had been done, and learned that it had been broken off; and then the first that I recollect about it was Chaffee's calling upon me after the withholding of that payment. I then stated to Chaffee the reason for withholding the payment; I stated to him that I had done so in order to bring him to a decision as to his position with Bourn & Brown; that I was satisfied that it was impossible to get a license, and that I regretted that it had not been brought to an issue before by withholding the previous payment; that I had suffered it to lie too long, and that there had been a great deal of fault found with me by the

licensees because I had neglected so long a prosecution of suits for infringement.

Q. That is, infringement of the Goodyear patent?

A. Of the Goodyear patent. I then asked Chaffee what his situation was in the concern; how he stood, and what he would sacrifice by leaving them; I was anxious to have him leave them. He said they had the control of the finance of the concern; that he received nothing but his support, himself and his family, and he either asked me what I would advise him to do, or I advised him to attempt, if possible, to have an amicable settlement with them, so that he could retire voluntarily, that he might not be affected with the suits which were brought against Bourn & Brown, if they chose to continue their infringement. I advised him that it would be best, if he failed in making the arrangement with them, to file a bill to wind up the concern, so as to secure some portion of the profits. Chaffee wanted me to commence my action for infringement first. I objected, because, as I stated to him, if that was done he would then certainly, as I thought, get nothing, because they would need what they had made to defend the infringement. Chaffee left me with the assurance that he would consult—

Mr. RICHARDSON. What did he say?

WITNESS. Saying that he would consult a lawyer in Providence as to the course which I advised; I advised him to consult some lawyer in Providence.

Q. Did you name any particular lawyer?

A. I did not. He left me assuring me that he would consult some lawyer, although I ought to say that Chaffee was strenuous to be paid his annuity, yet, at the same time, he went away promising to follow my advice, and, I supposed, was satisfied with the course which I had adopted. If Chaffee had told me that he did not intend—

Mr. RICHARDSON. You need not tell that.

Q. It was after that that he wrote you a letter, in which he said, "in the mean time I will consult a lawyer here?"

A. Yes, sir; it was after that. I ought to say that I stated to him that I should not hold him responsible for his infringement. All I desired was to separate himself from the concern of Bourn & Brown, that I might not be compelled to take proceedings against him.

Q. That letter of January 5, 1858, was received by you?

A. Yes, sir; that is the letter.

Q. That was in the course of that negotiation?

A. Yes, sir; that letter alludes to the interview and negotiation I had with Chaffee.

Q. In that negotiation with Chaffee under whose direction were you acting? (Objected to, as no part of the *res gesta*.)

Q. Did you state to Chaffee any thing more than you have told us about the demands of the licensees upon you, or their claims upon you, or their urgency upon you in regard to bringing that suit?

A. I stated that complaints had been made that I had been negligent or remiss in commencing suits against Bourn & Brown.

Q. By the shoe associates?

A. Yes, sir.

Q. Had they been made?

A. They had.

Q. Frequently or otherwise?

A. Frequently.

Q. How long had you abstained from acting upon these urgent appeals?

A. Until, I think, in April.

Q. Were any tariffs withheld in consequence of the non-prosecution of that suit with the licensees?

A. No, sir; not at that time; not that I am aware of.

Q. When was that attempted agreement between you and Chaffee broken off?

(Objected to.)

Q. Did it continue, or was it broken off at any time; and, if so, when?
(Objected to, but overruled.)

Q. I ask you whether the negotiation was continued or broken off?

A. I suppose it continued till about—

(Objected to.)

Q. State the actual fact?

A. I had no knowledge of Chaffee's intention to continue with Bourn & Brown his infringements, or that he was not carrying out the arrangement he had made with me till about two or three weeks previous to the letter which I wrote him on the 23d of June.

Q. Offering to pay?

A. Yes, sir; I had an interview then with Chaffee—he called upon me at my office—and at that interview I concluded from what he stated, that he did not intend to carry out the arrangement, but meant to continue his infringement.

Q. Up to the time that you wrote that letter offering to pay, had he ever said any thing upon the subject of any revocation of any instrument you held?

A. He had not; it never had come to my knowledge.

Q. Had he up to that time, or at any time, made any claim or statement in your presence, or to your knowledge, of having any title to the patent, or that the instruments you held were a security?

A. I never heard that Chaffee made any claim to the title to the patent, or any interest in the patent, till along about that time.

Q. Had you received a telegraph before that time?

A. I think not.

Q. Is that signature Mr. Goodyear's handwriting? (handing him a paper).

A. Yes, sir.

Q. Whose handwriting is the body of the paper?

A. Mr. Staples'.

Q. These are the signatures of Mr. Jarvis, Nathaniel Hayward, L. Candee, and Ford & Co.?

A. Yes, sir.

Mr. BRADY read the paper, releasing Mr. Staples from all claims and demands for professional services, approved by the parties named aforesaid, April 6, 1853.

Q. When did you first hear, from any source, that Mr. Staples pretended to have any claim for any services in the extension against Chaffee?

A. I never heard of any such claim till in some affidavits made in one of these cases, in Connecticut, I think, since the assignment to Day.

Q. Was Staples paid for all his services in that extension proceeding?

A. He was paid by me.

Q. Out of what fund?

A. Out of the trust fund; moneys in my hand.

Q. For all the services?

A. All the services that he had any right to charge.

Q. What was the amount of his salary for his services?

A. \$3,000.

Q. He retired, on consideration of being paid a salary of \$3,000?

A. Yes, sir; from June, 1850.

Q. Has that salary been paid him regularly?

A. It has been regularly paid up to June; I think you will find it on the receipts.

Q. Has there a bill been rendered to you by Mr. Staples; and, if so, when?

A. It was rendered to me about the date of June, 1853.

Q. Rendered in Mr. Staples' handwriting?

A. Yes, sir.

Q. Did Mr. Staples render any services to Chaffee whatever separate in that extension proceeding, to your knowledge?

A. He did not to my knowledge; he was bound by his contract—

Mr. RICHARDSON. You need not tell that.

Mr. BRADY here read the receipt of Mr. Staples for one quarter's salary, \$750, with interest; also another quarter's salary—making in all \$1,500.

Q. Look at that receipt, is that all in the hand-writing of Mr. Staples (handing him a paper)?

A. Yes, sir, it is.

Q. Was that money that is mentioned there paid?

A. Yes, sir.

Mr. BRADY read the receipt to Mr. Judson for his note of \$1,000, at 4 months, from Mr. Staples, dated April 6, 1852.

Q. You have stated that Mr. Staples was paid.

A. I think he was paid his salary, \$3,000 a year, regularly down till a period of time when we had a settlement, and \$3,000 extra.

Q. (By Mr. RICHARDSON.) Down to what time?

A. I shall have to look at some papers to fix the time.

Q. Look at that receipt of Oct. 11, 1851 (handing him a paper).

A. Yes, sir.

Mr. BRADY read the receipt for note of \$1,558 36, for six months salary, ending Nov. 1, 1851, including interest.

Q. From June 22, 1850, when Staples retired and was to receive a salary, up to what date has he been paid?

A. I had a settlement with him in which I paid him his salary at the time of that settlement, and \$3,000, which was not, according to my construction, due, the contract being that he was to be paid the \$3,000 additional in the event of the suit against Mr. Day being sustained in the highest court of last resort to which the same should be carried. I considered the judgment of the Court at Trenton, by Judge Grier, although it was in the circuit court, only, as a decision, and not as a court of final resort. That settlement was previous to the letter of April 16, 1853.

Q. He has now received it?

A. He received the \$3,000. That, I ought to state, was in notes; there was an agreement on the part of Staples to give up my contract; and I ought to state, Mr. Brady, lest there may be a wrong impression in regard to that, that the settlement will come down to six months previous to that time, because those notes were afterwards put into the bank by Mr. Staples, and purchased from the bank and were not paid, so that the settlement will be down to a period of time—

Q. The controversy raised between you and Mr. Staples on that subject is now pending?

A. Yes, sir. Mr. Staples has not given up the contract on which that settlement was made.

Q. How long is it that you and Staples have not been on friendly terms?

A. I have not had any personal intercourse with him since that time.

Q. What time?

A. The time of that settlement before April, 1853.

Q. Has any demand been made upon you, by any body, at any time to pay this \$750, which he claims he earned from Chaffee?

A. There has not.

Q. Did you ever hear of it?

A. I never heard any suggestion of any such claim whatever, or that any thing was due.

Q. How soon after the execution of the agreement of Sept. 5th, did Staples get knowledge of the fact that such a paper had been executed?

A. I presume he knew it very shortly afterwards, but I cannot state.

Q. Whose writing is that indorsed on this paper of Sept., 1850?

A. That is Mr. Staples'.

Mr. BRADY read the indorsement—"E. M. Chaffee's assignment and power to William Judson, 5th Sept., 1850, and record."

Cross-examined by Mr. Richardson.

Q. When were you admitted to the bar?

A. I was admitted first in 1836 or '7, at N. Haven, Conn., and afterwards in N. York, I think, in 1838 or '9.

Q. You practised in N. Haven a year or two?

A. No, sir; I was in the law school; I was admitted when I was in the law school.

Q. You first went into practice in N. York?

A. Yes, sir; I never practised in Conn.

Q. What year did you go into practice in N. York?

A. I think in 1839, immediately after my admission.

Q. Did you practise in the years 1839 and '40?

A. I practised in 1839, '40, '41, '42, '43 and '4; about 1845, I left the practice, as a practising attorney in my regular business—about 1845 or '6.

Q. Then you practised as attorney in the patent cases?

A. I divided my time exclusively as counsel for Goodyear, and attorney in his patent suits, and every thing relating to his patents.

Q. And have ever since?

A. Yes, sir.

Q. Were you not attorney in a case in 1853 and '4, between Day and the U. S. Car Spring Co.?

A. Yes, sir; I think very likely.

Q. That was in 1853, was it not?

A. Yes, sir.

Q. You took an active part in that case?

A. I presume I did; whatever was done I presume was done under my direction.

Q. Do you remember about what time you commenced your engagement as counsel and attorney in that case? Give the date as near as you can.

A. I never had any thing to do with it till I became personally interested in the company, as they became licensees of Goodyear.

Q. I ask you for the date?

A. Until after that date I didn't have any thing—

Q. I don't want that; give the date.

A. I shall have to refer to some papers.

Q. Were you counsel in it in March last?

A. I am counsel for it now—all the time.

Q. You were in March last?

A. I was counsel for the company, and advised in regard to its affairs.

Q. In March last were you counsel, and did you act as counsel either in or out of court, in the circuit court of N. J. district, in an application for an attachment for contempt of court against Horace H. Day?

A. I have no doubt I was counsel, knew all about it, and advised if there was any thing done.

Q. It was a contempt of court proceeding for infringing some of Goodyear's patents in the Conn. circuit was it not?

A. Is that the case in which Mr. Dickerson was attorney?

Q. He was in the case.

A. I was attorney of record, and if there were any particular suits conducted—I had not the direction of all the details of the proceedings in the suits—but if any thing was done, of importance, I have no doubt I had knowledge of it, and advised it.

Q. You directed that process to be applied for?

A. I don't know whether I did or not; I have no doubt I advised it.

Q. Were you in N. Jersey at the time the motion was made?

A. I was.

Q. Did you sit at the bar with the counsel?

A. I have no doubt.

Q. Did you hear the witnesses testify, or the affidavits read?

A. No doubt.

Q. Did you consult with Mr. O'Connor, Mr. Dickerson, and Mr. Brady, there?

A. Yes, sir.

Q. About that time did you cause to be instituted two bills in equity returnable for a motion for injunction, against Mr. Day, in Cooperstown?

Mr. BRADY. For what?

Mr. RICHARDSON. To restrain him from prosecuting this identical suit.

WITNESS. I had nothing to do with Dr. Hartshorn.

Mr. BRADY objected to this inquiry.

Mr. RICHARDSON said his object was to show the acts of the witness only, and not to go beyond that.

Q. Did you procure to be filed a bill in equity, in which Dr. Hartshorn and others were plaintiffs, for a motion for injunction, at Cooperstown, N. Y., to be heard the next day after the one that was to be heard in New Jersey?

A. I had all to do with that, but I do not recollect that Dr. Hartshorn had any thing to do with it.

Q. Don't you recollect that Dr. Hartshorn, Hayward, Ford, and a number of others were parties to it?

A. I do not recollect that Dr. Hartshorn was a party to it; I recollect that the four shoe associates were parties, and Mr. Goodyear.

Q. Were you a party to it?

A. No; I believe I was not a party to it.

Q. (By Mr. BRADY.) Specify the suit.

A. There were a great many, and I had to do with all of them.

Q. It was a suit which was brought in Cooperstown?

A. I advised and directed in all those suits, no matter what they were, that related to Goodyear's patents, and had an intimate knowledge of every thing done in them.

Q. In the case between Day and the United States Car Spring Company, did you send up to Connecticut to take some affidavits?

A. I directed affidavits to be taken in Connecticut, at the factory of the United States Car Spring Company; I directed the agent to take some affidavits up there of some workmen.

Q. Did he take them?

A. He did.

Q. Was there any heading upon those affidavits at the time they were taken?

A. There were not when they were brought to me.

Q. Did you put any on yourself?

A. I did not.

Q. Did you send them to your agent with direction to put on a heading in the New Jersey suit?

A. I did not; that direction came from Mr. Dickerson. When those affidavits came into my office without any heading, Mr. Burchard, my clerk, called my attention to the fact that there was no caption to the affidavits. I stated to Mr. Burchard that it was a suit of Mr. Dickerson's, and I had nothing to say about it. I thought they must go as they were. Mr. Dickerson afterwards came in, and stated that it was a matter of form, and he sent Mr. Jarvis or Mr. Burchard to Mr. Davis, and Mr. Davis put on the caption. It was not done under my advice or by my suggestion, but contrary to my judgment.

Q. Mr. Dickerson advised that?

A. Yes, sir.

Q. I want to know if, at the time these witnesses were sworn, you did not direct them to be told those affidavits were to be used in the case in New York, between the company for which they were at work and Mr. Day?

A. When they were taken my impression was that they were to be used in the New Jersey case. I believe that was my impression; I do not recollect distinctly, but I know this in regard to it: I supposed when they were taken that Col. Davis knew how to take them—how it should be done—that it should be with a caption, and I was surprised when they came back without any caption. That is all I know about it. As to the fact whether they were to be used in New York or New Jersey, I do not at this moment recollect; but if I had the papers before me I could tell, probably, in what particular

State they were to be used. If the question is, whether they were to be taken to be used in either suit, I answer, that there was no such idea in my mind whatever.

Q. I put this question: Did you not know that those witnesses would not give affidavits in the New Jersey case; and did you not tell Col. Davis to go up there and tell them that you wanted their affidavits to be used in the case of the United States Car Spring Company, and to leave the headings off, get them to swear to them, and then bring them down to you?

A. I told Col. Davis to go to the factory and get the affidavits of these men. I did not know whether he could get them, or whether they were reluctant witnesses or not. I did not know any thing about it until he came down and said he could not get their affidavits. I told him to go back and to get the affidavits of these men, and if, on account of their feelings towards Mr. Day, they would not give their affidavits, as he stated, (it was a very simple matter; it was the truth;) I said I should be in favor of having them discharged. Col. Davis came back, and the next I heard of it was the affidavits without captions. That is all I know about it. But in answer whether I gave any other instruction or direction, I did not.

Q. Did you tell them to have the hands turned off?

A. I told them afterwards—after the affidavits had been procured, that if I had had control of the factory I should discharge the men.

Q. Didn't you have control?

A. No, I did not have control; I was a director in the company, and if I chose to exercise it with the interest I controlled, I could have secured the control; but I had not the practical management.

Q. Then you did not give direction to have the witnesses told that the affidavits were to be used in one case, and to have the heading left off?

A. No, sir, I did not do any thing of the kind; I never thought of such a thing; I never have done such a thing in any case, that I am aware of.

Q. Did you take those affidavits over to New Jersey and use them?

A. As to that, since the question is reflecting upon me, in regard to what was done with those affidavits, it is a long time since the trial, and Mr. Burchard, my clerk, and Mr. Jarvis can corroborate my statement in regard to that transaction.

Q. Didn't you, Burchard and Jarvis hear Col. Davis testify about that in New York?

A. I did.

Q. Didn't they hear?

A. Yes.

Q. Did they ever afterwards give any explanation of it in court?

A. I don't know as the time has ever come to give it.

Q. They didn't give it there?

A. There was no opportunity given. I insisted upon an explanation, but the counsel thought it was of no consequence.

Q. They were used in New Jersey when you were present?

A. They were.

Q. You did not inform the court, I suppose, of their alteration?

A. It was not my business to inform the court; Mr. Dickerson was there.

Objection was made by some affidavit, however, by these men.

Q. (By Mr. BRADY.) It was brought to the notice of the court?

A. It was.

Q. It did not come from *that* side of the case?

A. No, sir; it came from the affidavits of these men I believe.

Q. You testified when you was on the stand several days ago that you never had sued anybody in the name of Goodyear for infringing the Chaffee patent?

A. I never have sued, I testified, and I say so now, till after the extension; I sued nobody but Horace H. Day for infringement of the Chaffee patent previous to the extension.

Q. Didn't you sue the Boston Belting Co. previous to the extension?

A. Never, to my recollection; I have no knowledge of such a suit.

Q. Didn't you say the other day that you never sued anybody except Mr. Day for infringing the patent previous to its extension?

A. I believe I did state it as the fact.

Q. Haven't you sued McBurney, and is not the suit pending, for infringement previous to the extension?

A. I have no knowledge of it whatever.

Q. Was not a suit pending against the Boston Belting Company, or the managers as such, for infringement of the Chaffee patent, both before and after the extension, at the time you entered into this new contract of November 12, 1851?

A. I have no knowledge of such a suit; if there is any such suit it is entirely beyond my recollection.

Q. Do you remember suing McBurney in New York?

A. Yes, sir.

Q. For what?

A. I think there were three or four suits against the Boston Belting Company that have been in existence three, four, or five years.

Q. What are they for?

A. One is for infringement on Goodyear's patent tariffs, and some in behalf of the licensees for infringement on the rights of the licensees. There are four or five different suits or processes; the nature of them I cannot undertake to state without the papers.

Q. Did you bring these suits?

A. I brought all the suits, I presume, within the last three or four years.

Q. Look at that (handing him a paper) and see if that is a suit you brought.

A. (Examining it). This is a suit I brought.

Q. Does that include the Chaffee patent?

A. I do not see it.

Q. When was that brought?

A. November 7, 1850, it appears.

Q. Did you bring any other suits against the Boston Belting Company?

A. Yes, sir, there are other suits—three or four.

Q. Will you now say that in this suit the Chaffee patent is not included?

A. I can say that I have no knowledge of any suit ever being commenced against any body in the world before or since the extension, except against Mr. Day.

Q. You don't remember any other suits?

A. I mean to say I have no knowledge of any suit being commenced on the original patent, or since its extension, except against Mr. Day.

Mr. RICHARDSON read the complaint which included the Chaffee patent.

WITNESS. I am in error in regard to that; Mr. Staples drew that I believe; I was not aware of it; I am certain no proof was ever taken in regard to it.

Q. Has not that suit been up before the court within a year in New York?

A. There has been nothing before the court in regard to that Chaffee patent whatever.

Mr. RICHARDSON. The suit was filed on the 7th of November, 1850, and was brought prior to that; it must have been before the extension.

Q. I ask you if this suit has not been up within a year?

A. The suit itself? What precise position that suit is in now I do not know; but I presume it is in existence still; it has not been discharged I presume.

Q. Is not that suit pending now of record in the Circuit Court of New York?

A. I presume it is pending at the present time.

Q. Are you not attorney of record in that suit?

A. I am; I presume that suit is pending still.

Q. Were you at court a year ago last summer when a motion for injunction was made before his honor Judge Pitman between Day and Hartshorn?

A. Yes, sir.

Q. Did you make an affidavit in that case?

A. I do not recollect at this moment; I presume I did.

Q. Did you there under oath attempt to give an account of why you did not pay Chaffee, or state any thing in writing?

Mr. BRADY. Show him the affidavit; that is the rule.

Q. Did you not testify or state in a paper, signed by yourself, which was furnished us by Mr. Brady, this language?

Mr. BRADY. Show it to the witness.

Mr. RICHARDSON. I propose to ask the witness if he did not so state.

The COURT. Well, ask him.

Q. Did you not state there that although you for a time withheld the payment of said sums under the agreement of November 12, 1851, it was not with the intent of depriving Mr. Chaffee of the amount accruing to him, or any part thereof, but because said Chaffee had, for a long time, been, and then was, associated with Bourn & Brown in Providence?

A. I presume so; that is true if I did not state it.

Q. Did you in that affidavit say any thing, or in connection with that, say any thing in reference to Chaffee's having assented to the withholding of the annuity?

A. I do not recollect whether I did or not.

Q. Did you not say these words? (Reads a portion of the affidavit in relation to Judson's being desirous of inducing Chaffee to leave Bourn & Brown).

A. Yea, sir; that is true.

Q. Did you not say this? "But when I discovered that I could not effect with Chaffee what I thus desired, on the 23d of June, 1853, I wrote to him a letter, of which a copy was not kept."

A. Yes, sir.

Q. Did you in that affidavit say any thing about the advance of \$1500 on the whole contract, or any advance of \$1500?

A. I stated something in one of my affidavits—either in that or another. My views and knowledge in regard to the question whether it was an advance or not, I have already stated.

Q. I know that, but did you say any thing about it in that affidavit?

A. Will you point me to the place?

Q. I cannot; I do not know that it is there; I ask if you said any thing about it on that occasion?

A. (Looking at the paper.) I do not see any thing about it; I have not read it through.

Q. Do you recollect stating any thing about it on that occasion at Newport?

A. I have no distinct recollection whether it is in the affidavit or not.

Q. Did you make some affidavits very soon after that in Connecticut?

A. Yes, sir.

Q. Did you state any thing about it there?

A. Yes, sir.

Q. What did you state about it then?

A. I stated there that I believed it was an advance, and I was not willing to state any stronger than that—any further than my belief; but since my interviews with Hutchinson I am very strongly impressed, and I think I can safely say that I am quite sure that it was an advance and not a bonus. I was not willing to say any thing more than my simple belief that it was an advance, Mr. Candee and I having differed, Mr. Candee being certain.

Q. Do you mean to say you differed?

A. I do not mean to say I differed, but Mr. Candee was positive and I was not.

Q. Didn't you then explain as to your previous conduct in reference to Chaffee that you didn't know the fact that the \$1500 was paid till it was disclosed there as a bonus?

A. That any bonus was paid?

Q. That you didn't know of the fact of the payment of this \$1500 at all?

A. No; I knew these payments were made by these parties—I dare say without my knowledge at the time.

Q. Didn't you excuse yourself in your statement there?

Mr. BRADY. I want the gentleman to comply with the rules and present the affidavit.

The COURT. I think, especially when by your manner you are undertaking to contradict the witness, you should offer the affidavit.

Q. Didn't you say to me personally in conversation on the steps of the court house that you never knew that the \$1,500 had been paid till you got to Connecticut?

A. I do not recollect at this distance of time the particular conversation we had about that; my recollection is fresh about the circumstance I now state, and the difference between myself and Mr. Candee in regard to the fact whether it was an advance or not, was I could not go so far as he did in swearing positively to it.

Q. Look at that affidavit and see if you swore to it (handing him a copy of the affidavit)?

A. I have no doubt I made it.

Q. Do you remember that that affidavit was mistakingly headed wrong, and that it was used in Connecticut?

A. (No answer heard).

Q. Didn't you state this? "I further state that I insisted upon the terms of the agreement of September 5th, 1850, as a matter of strict actual right from the Goodyear licensees to Chaffee, respectively, as well as to myself according to my best knowledge and belief, founded in part upon information got from Leverett Candee and some payments made by him and the other licensees as stated in his affidavit, which have recently come to my knowledge, that said Chaffee had been fully paid the amount due to him under the agreement at and before the time of his alleged assignment to the plaintiff?"

A. That is correct; that is what I state now—just the same statement.

Q. Did you not state that on the 28d of June, 1853, supposing that something was or might be in arrear you wrote a letter to Chaffee stating to him your readiness to pay that which was due?

A. Yes, sir; that is what I meant, and would make the statement now; I did think the amount was in arrear.

Q. I only ask if you so testified there?

A. I suppose I can state what I meant by that; I meant that the interviews with Mr. Candee had brought to my mind the production of receipts of payments which made it difficult for me to reconcile my continuous payments to him from the beginning notwithstanding the \$1,500—going on and paying them continuously, which Mr. Hutchinson clears up by his testimony; and I am satisfied that he is correct and that there was something due Chaffee—that this advance of \$1,500 was an advance on the whole period and not on the first year. Mr. Candee thought it was an advance on the first year.

Q. Didn't you tell Mr. Woodman in New York, before he went to New Haven, that he might tell Chaffee that if he would come into this arrangement and give you this paper and the control of the patent, you would give him \$1,500 down as a bonus, using that language?

A. I have no recollection of any such thing and don't believe I ever considered it a bonus. I think my best recollection about it is, that it was not agreed till after they were signed—even that I agreed to consider it an advance. That is my best recollection—that the \$1,500 was agreed to afterwards.

Q. Didn't you tell Woodman to tell Chaffee that the \$1,500 he should have clear, any way, and then that he should have \$1,200 a year paid to him quarterly, if he would come into the terms you proposed?

A. I do not think that is true.

Q. Can you say it is not?

A. I think I can say positively it is not; I am quite certain it could not be so.

Q. I now refer to the conversation between you and Woodman before he went to Connecticut—whether you did not so state?

A. I do not think the idea was ever suggested of any thing over and above the \$1,200 a year as provided in that agreement.

Q. After you got to New Haven was not that the first you ever heard of the \$1,500 in advance?

A. Yes, I think it was.

Q. Who started that idea?

A. I do not know; either Woodman or Chaffee.

Q. Did you not tell Woodman in New Haven that you would raise the \$300 a year more if you got Chaffee to consent?

A. I know that was not suggested; Woodman I recollect was anxious to intercede with me to raise the amount when I got to New Haven.

Q. Don't you recollect that Chaffee asked you whether the \$1,500 that was to be paid down ought not to be put in the paper?

A. He did; he requested to have it made so, but I objected to writing the papers over again.

Q. Then you do recollect that Chaffee told you that the \$1,500 ought to be paid down?

A. Not the bonus—not at all—that the consideration itself, the \$1,200, as provided in the agreement—he wanted it stipulated for in the agreement; that is, the \$1,200 altered to \$1,500, which I objected to doing, but gave him my promise, or what might be considered as amounting to that, that it should be done.

Q. Didn't you state a moment ago that he requested that the \$1,500 should be put into the paper?

A. In addition? Not at all.

Q. Didn't he speak of it?

A. No suggestion of that kind was made at all; I never heard of it.

Q. You then didn't know that the \$1,500 was to be paid down?

A. I didn't know that the \$1,500 was to be paid down at all; but according to my best recollection the agreement to pay \$1,500 was after the paper was signed—that he should have it, and should be paid in advance. I recollect Mr. Candee saying to me not to stand about it—that when Chaffee urged it or Woodman and I assented, I waived it and assented to having it made \$1,500 instead of \$1,200. But if you mean that there was any distinct agreement that there should be \$1,500 as a consideration over and above what was provided for in the agreement, it is not so.

Q. I know that, but I want to know if any thing was said about putting in the paper that \$1,500 down?

A. I never heard a word about it.

Q. Did you hear any thing about it on that occasion?

A. I do not recollect any thing of the kind.

Q. Do you recollect any conversation at any time before or after the execution of the papers while in New Haven about the \$1,500 being paid at any time except the annual instalments?

A. Not in addition to it—over and above it.

Q. Do you recollect any thing being said about its being paid at any one time, no matter whether from the first year down or under the last year down?

A. I know there was an attempt to get some money for Chaffee; he wanted an advance. That is all I know; I do not call to mind any interviews or any thing in particular that took place.

Q. Do you now call to mind the conversation that took place about that \$1,500, anywhere, at any time?

A. I do not recollect any thing.

Q. Didn't you know a fortnight after that time that the whole \$1,500 had been paid Chaffee?

A. No, I don't think I did. I think I left that to Mr. Candee and these associates, and I do not know when I was first apprised when the amount was paid up.

Q. You think you left it to them?

A. I think all that money was paid by them. All I know about it is, I received some letters in relation to having some money.

Q. In relation to that \$1,500?

A. What? the annuity?

Q. The \$1,500 that you say was paid and that these receipts show as having been paid?

A. I do not recollect any thing about any letters from Chaffee about that or what was said about it.

Q. Do you now recollect that the \$1,500 was paid in part before the first quarterly payment fell due?

A. I do not distinctly recollect what took place, because that was attended to by Mr. Candee; and when I knew the first about it I cannot say.

Q. Didn't you know when the first instalment fell due that the \$1,500 had been paid under some circumstances?

A. Whether I did or not I cannot say, because my recollection was not distinct about that and is not now except by explaining it by Mr. Hutchinson's affidavit; and if I am correct about that, then I did not probably know of these payments and it went right on.

Q. I simply want to know whether you know during that quarter that this \$1,500 was paid.

The Court. He says he don't recollect.

Q. You say now you don't recollect the fact whether you did or not?

A. I do not recollect distinctly the fact when I first knew that the \$1,500—the first instalment—was paid.

Q. Didn't you recollect when you first knew it over in Connecticut?

A. I do not know; I presume not. I have not any distinct recollection about it and cannot swear to it positively, whether it was so or not. I may be in error about that and Mr. Candee may be right, or Mr. Hutchinson may be right. My recollection is not distinct about it.

Q. You do not know whether you recollected at any time afterwards the payment of it?

A. I cannot state positively; my recollection is not sufficiently distinct whether I or Mr. Hutchinson or Mr. Candee is right.

Q. Were you up at the Union Hotel with Mr. Goodyear and Chaffee on the 23d of May, 1850?

A. I think very probably that I was.

Q. Didn't you draw up a portion of that original paper contract?

A. I cannot state; I think it very likely that I advised it and was there, and I may possibly have commenced writing it and left it.

Q. Perhaps I may refresh your recollection; didn't you write it down to the place where it came to the statement about shellac?

A. I cannot recollect.

Q. Don't you remember leaving them very abruptly when you were writing it?

A. No, sir; I do not recollect distinctly of writing the paper.

Q. Don't you recollect going the same night, (the 23d of May) to Worcester, Mass., or in that neighborhood?

A. I do not.

Q. Don't you remember, on the discovery of the fact that Goodyear was going to take out a patent in Chaffee's name for shellac, that you abandoned the papers at once and went immediately and bought an interest of somebody?

A. No, I do not remember that; I remember distinctly about all that transaction.

Q. Won't you state about it? I inquired about your buying something to prevent Goodyear's getting the patent.

A. I never bought up any thing; I never had any interest in any shellac.

The Court. This is very incidental; you wished to know whether he was present at the time of drawing the paper.

Mr. BRADY. Go on, Mr. Judson.

Witness. In regard to the shellac patent, I stated that I acted on the supposition.

The Court. You need not go into that.

Q. Mr. Goodyear didn't get a patent for shellac?

A. Another man had a prior invention, and I so advised Goodyear, and he didn't proceed with it. Chaffee was not the first inventor of the shellac patent, so that that could not be taken out.

Q. And you knew about the contract, about the shellac patent?

A. I knew that that was embraced in the same contract with Goodyear.

Q. Haven't you said you never saw that contract till it was brought into court?

A. I have; I never did see it.

Q. Didn't you know precisely what it was?

A. I didn't know precisely what it was at all; I took it for granted that they acted upon the assumption that that contract was what I advised Goodyear to make it; I didn't know the details or the particulars of it, and took Chaffee's statement.

Q. How did Mr. Staples' argument get to Washington, upon the extension case?

A. I do not now know.

Q. Do you know whether you carried it?

A. I dare say.

Q. You remember he made an argument on that case?

A. I do not know whether he was in Washington at the time or not; if he was not, I probably delivered the argument to the Commissioner on Patents.

Q. You saw the argument before that and read it?

A. I have no doubt I did; I cannot swear positively that I did.

Q. Didn't you read the testimony in the case?

A. I did not; on my return from Boston I went to Washington, and didn't see any testimony that had been taken in my absence in New York. And as to Mr. Staples, I cannot state whether his argument was sent by himself to the commissioner on patents or whether I saw it or not, because I went within two days after my return from Boston to Washington, and I do not know what had taken place in New York.

Q. Did you read Mr. Gifford's argument?

A. I never saw his argument till long after the extension.

Q. Did you read Mr. Keller's?

A. I don't think I saw Mr. Keller's; he made two long arguments, and Mr. Staples put in one; I don't think I saw either.

The COURT. I suppose you don't want these arguments?

MR. RICHARDSON. Yes, sir, I do.

Q. You don't know that you read even Mr. Staples' argument?

A. I cannot state positively; my doubt arises from the fact that I so soon went on to Washington, and I don't know where he was—at Washington or here; perhaps he had sent on his argument.

Q. Do you recollect the date of your being at Boston?

A. I can state it exactly by looking at the papers; but I think I went on Wednesday, about the 20th. I was there during Thursday, Friday, Saturday, Sunday, and Monday. I think I arrived at New York on Tuesday morning, was there two days and went to Washington.

Q. Was not Chaffee's testimony taken in New York, on the fifteenth of August?

A. I never was present; I do not know.

Q. Were you present when his direct examination was taken?

A. I was not; the testimony that I attended to was taken before Mr. Balestier, commissioner, and the other parts were taken, three or four witnesses were examined before Mr. Sherman, commissioner. I never was in the place before Mr. Sherman at all, and never had any thing to do with the examination, Mr. Staples attended to that exclusively.

Q. Don't you know when that question was under consideration, that one of the points made by Mr. Gifford, who opposed the extension, and Mr. Smales also, was, that Chaffee had made some sort of a sale or agreement to sell to Goodyear?

A. Mr. Gilford and all of us acted on that supposition; that it was to go to Goodyear, and that was the great objection to the extension.

Q. Was not there then a doubt about the extension law—whether in point of law it could be granted if a certain kind of contract had been made with Goodyear?

A. One great point of doubt in the case was, whether Chaffee could have it granted to him without the concurrence of Goodyear and his uniting with Chaffee. That being fixed, as already appearing, the next objection was, and what was sought to be substantiated, that the benefits of the extension were to go to Goodyear; and we supposed that under the arrangement and contract that was made, there was benefit enough to Chaffee to answer the requirements of the law, and that the property should go to Goodyear—that what Chaffee was to receive was a sufficient benefit to him to meet the requirements of the law.

Q. That was the question for consultation?

A. That was the argument, I believe, in the case.

Q. Was not that consulted about, between your counsel as a grave question of law?

A. It might have been treated as a grave question in the argument, in regard to the proof, I am not aware of any proof being taken except that I announced that Goodyear was the owner, on the taking of the testimony.

Q. What testimony?

A. Before Mr. Balestier.

Q. Where?

A. I made a commencement before Mr. Balestier; when proof was offered to show that this patent had been in free and uninterrupted use by every body without any compensation being paid, or any notice to any body that they infringed, that these parties who were using it were licensees of Goodyear in almost all cases—that Goodyear was the owner of the original patent, and that they had consented—and I believed they had consented—to the application; or it appeared by my appearance in their behalf.

Q. I am only getting at one thing; did you not consult about what Chaffee should disclose in reference to the situation of the contract between him and Goodyear?

A. No, sir; if there was any discussion or any thing considered in that respect, it was by Mr. Staples.

Q. Did not you advise with Mr. Staples and Chaffee upon the subject, or with Staples?

A. I did not; I never knew that any inquiry had been made of Chaffee in regard to his interest in this extension, till after it was obtained.

Q. You didn't know it at Washington?

A. If I did know it at all it was after I arrived there, from Mr. Keller perhaps; but, I never had seen the deposition of Chaffee, and never knew of the inquiry being made.

Q. Didn't you know at Washington that that had become a point in the case, and that Chaffee had been inquired about, and what he answered?

A. I cannot answer; after I arrived at Washington, in my interview with Mr. Keller, I cannot now state whether it was stated to me what Chaffee had stated on that subject; I do not recollect distinctly when I knew that Chaffee had given this deposition upon that subject, because I never saw it, and don't recollect any interview with Staples on my return.

Q. Did you not know before that extension at Washington, that Chaffee had sworn that he was to receive \$3,000, and an interest in the globe business, the carpet business, or some other interest?

A. I never heard of any globe or carpet business, or any other interest than the \$3,000, till the testimony.

Q. Did you know it was \$3,000?

A. I cannot state positively that I knew exactly what the amount was that Chaffee was to receive; and I acted upon the assumption and statement of Goodyear, that he had made a contract with Chaffee for the benefit of himself

and his licensees, and went on and appropriated money to get it done, and I cannot state that I knew exactly, or inquired exactly, what the contract was.

Q. You didn't learn what it was up to the time of the extension?

A. I cannot state.

The Court here suggested that he thought the counsel ought to be satisfied with two answers to the same fact; to repeat the same question so often would leave the impression upon the jury that the counsel did not believe the witness.

Mr. RICHARDSON said that he was not satisfied with general answers, and he wanted now to ask the witness if he will testify that on the 5th of September, 1850, when he made these papers, he did not know the entire consideration to be paid to Chaffee, on account of Mr. Goodyear.

The Court. Put it.

WITNESS. I did not, to my best knowledge and recollection.

Q. Now, you have said that you had a conversation in the street in New York, or in your office, before you went to Mr. Staples' house, did you say any thing to Chaffee about the \$1,200 a year there?

A. No, sir.

Q. Did you name any sum to him?

A. I do not recollect that I did—that any sum was named, for the arrangement was to carry out this contract with Goodyear for the same consideration—\$3,000.

Q. I want you to answer the question. Was any sum spoken of at that time?

A. I do not recollect distinctly whether it was or not, I think probably it was, because the draft was prepared by Mr. Staples, at my request, and he had it at the house on the evening, already prepared with the consideration in; I may possibly be mistaken about that; it might not be in; I cannot state with perfect certainty that it was not prepared at the time, but my recollection is that it was prepared by my instruction. He had it at his house.

Q. When you got up to Mr. Staples' house was any thing said about the consideration, that you recollect?

A. I think the \$3,000 consideration that Chaffee was to get, was stated by Chaffee; I think it was in the contract itself—that the consideration for which he was to assign the patent to Goodyear was stated in the paper itself.

Q. Have you any other recollection about it except what you saw in that paper?

A. I can only say I think it was so. I am not prepared to say.

Q. Do you recollect that any thing was said about other considerations?

A. I do not think there was any thing at all; I am quite certain that nothing was said or intimated to me from any quarter, that there was any other consideration but the \$3,000.

Q. That you are certain about?

A. That I am certain that I never knew or supposed there was any other consideration, and that Chaffee made any other objection: this is my best recollection about that.

Q. Did Chaffee that first night express himself satisfied about the amount?

A. My recollection is that Chaffee never made any objection at all to the amount whatever, but that he was under obligation to convey it to Goodyear and that Goodyear would find fault.

Q. If he didn't find fault with the amount, what motive did you have for increasing that offer to \$1,200 a year through Woodman, when you saw Woodman, instead of the \$3,000 down?

A. Because I had my doubts then about Chaffee—his refusal; I thought he ought not to make the objection to making the conveyance to me in trust. Knowing my relation as he did, and knowing all the circumstances, I had some doubt about his intention—what he would do; and my situation was such in regard to these licensees that I did not mean to leave it in that position; and if Chaffee proposed to dispose of the extension, there was no certainty that he would give it over to Mr. Goodyear; and my position would have been a very bad one if Chaffee had done any such thing, and the responsibility would have been altogether upon me.

Q. That is the reason you gave for increasing the amount?

A. I do not know whether that was the reason or not.

Q. Do you remember the reason?

A. The increased amount was made no doubt, it was an inducement to Chaffee to execute the agreement.

Q. But he didn't find any fault with the amount, you say. When did he first say that the amount was not enough, if he ever did?

A. Which amount?

Q. Any amount that you offered him; the \$1,200 a year or whatever you did offer.

A. He was anxious, and Woodman who made the negotiation was anxious to get as large a sum as possible.

Q. Didn't you tell Woodman that you wanted he should bring Chaffee into this if possible, and persuade him to do it?

A. Woodman went to New Haven for the purpose of inducing Chaffee to make that arrangement for me.

Q. He went under your employment didn't he?

A. You may so consider it, I suppose; he professed to act as Chaffee's friend always, and he certainly went at my request to persuade Chaffee that he had better make the arrangement.

Q. Didn't you take advantage of using Woodman because Chaffee had confidence in him, and induce Woodman to go up there, yourself, to induce Chaffee to come into the contract?

A. I thought Woodman was the most suitable person to go, under the circumstances, because he had been to Washington with Chaffee.

Q. You got Woodman to go to Washington originally?

A. Yes.

Q. Did he object to going when you first applied to him?

A. I do not know whether he hesitated about going or not.

Q. Didn't he tell you he was wanted at the custom house and could not go?

A. I believe he told me he was wanted at the custom house; I do not know how much objection he made to going; I think he was very glad to go.

Q. Didn't you tell him it was for the interest of Chaffee, and urge that upon him as the reason why he should go—as the friend of Chaffee?

A. No, I have no recollection of that; I think Woodman perfectly well understood it was for Goodyear, and what my relation was.

Q. So you say.

A. I have no doubt about that; I have no recollection about saying any such thing, and don't believe I did.

Q. You heard Woodman testify on that subject?

A. I did.

Q. After you got up to New Haven you first saw Chaffee, you think, at the hotel—the Tontine House; was Woodman with him at that time?

A. I do not recollect whether he was or not; I could not state with entire positiveness whether I first saw Chaffee at the hotel or not; but that is the best of my recollection about it.

Q. Didn't you tell Woodman that you were afraid Chaffee would see Goodyear, and you wanted he should go along up and not wait for you?

A. Before the paper was executed?

Q. While you were in New York, after you found Chaffee was at New Haven. In the first place, didn't you urge Woodman to go immediately to New Haven?

A. I think very likely I employed him to go.

Q. Didn't you assign as one reason why you wanted him to go that you were afraid Chaffee would see Goodyear?

A. I do not recollect that; but I recollect perfectly well that I was anxious at the time when it was concluded to make that arrangement that I should explain the matter to Goodyear himself, and intended, if I could, to prevent his seeing him till I had seen him.

Q. Didn't you intend to prevent Chaffee's seeing Goodyear till you had got the papers closed and signed?

A. No; I cannot recollect that; I do not think that was so; I think not; I cannot be positive; my recollection is not distinct about that.

Q. You said that you insisted very strongly at Mr. Staples' house that it should be done; what do you mean by that?

A. The language is plain, I believe; there is no ambiguity about the statement.

Q. How did you insist?—what words did you use to insist?

A. I do not know; I cannot state any particular words that I used; I recollect that I urged very strongly Chaffee to do it, and that he ought to do it. I thought I had a right to insist upon it, and did insist upon it with considerable warmth as my right, considering my relation to Goodyear and his licensees; the licensees being as much interested as Goodyear. As I acted for both, I supposed I had a right to insist where the patent should go.

Q. In that strong insisting, didn't you get very much in temper?

A. I think very likely.

Q. Didn't you threaten Chaffee a little?

A. I am not aware of any threats.

Q. Can you recollect what you did say?

A. I do not think I made any threats, so to speak, if that is what you mean. I mean I was indignant, and insisted upon his doing as was proposed.

Q. That is, you insisted upon his signing this \$3000 paper?

A. Yes, sir.

Q. Didn't Chaffee leave, at the time you were walking the floor, in a good deal of excitement?

A. I believe he did; I think I went out with him.

Q. Didn't Staples say to Chaffee, "Chaffee, you have just got nicely settled in New Haven, and got your family comfortable, and it will be bad to be all broken up?"

A. Well, I do not recollect that language; I recollect Mr. Staples advising Chaffee to do that as the best thing for him to do, and as right towards Goodyear, but I do not recollect his saying any such thing as that.

Q. Do you recollect Woodman's telling you that Chaffee had passed a very sleepless, excited night?

A. I cannot recollect any thing of that kind.

Q. Don't you recollect that when Woodman came up to you the next day he told you that he was afraid Chaffee had gone off to New Haven; that he had had a sleepless night, and was in very great excitement about it?

A. I cannot recollect, Mr. Richardson; I have no recollection about that. I had an interview with Mr. Woodman in which he made—

Q. You don't recollect what he said?

A. I cannot recollect that.

Q. You recollect distinctly that you didn't tell him you would break Chaffee up in his business?

A. I do; I know it was impossible that I should have said that.

Q. Didn't you tell him you would sue and destroy Chaffee?

A. No, sir.

Q. Didn't you threaten to go up to Connecticut and sue him for these expenses?

A. Nothing of the kind.

Q. Did you threaten him at all?

A. No, sir, I did not.

Q. Did you threaten him with any thing?

A. I am not aware, if you mean threats, that any threats were made towards Chaffee to his personal injury of any kind whatever.

Q. Didn't you tell him you would do any thing if he didn't sign that paper?

A. Nothing whatever that I know of. I insisted he should sign it; that is all I recollect.

Q. Did you tell him that any consequences would be attendant upon his not signing it?

A. I do not recollect any thing.

Q. You can't remember a thing?

A. No, I cannot.

Q. In the case of making your affidavit in equity, in Rhode Island, did you say any thing about how these expenses were paid and by whom?

A. I do not recollect what was in the affidavit about that.

Q. Don't you recollect that you didn't say any thing about it?

A. If you will get me the affidavit I will tell you.

Q. Do you recollect that you said any thing about it in New Haven?

A. I don't recollect any thing about it.

Q. Do you recollect that you were summoned by the Boston Belting Company to give your affidavit in their favor in New York before the United States Commissioner?

A. I do.

Q. Do you recollect that the question was put to you there about the payment of these expenses?

A. I do not recollect now whether that precise question was put.

Q. Any thing involving that?

A. I cannot answer that question now; if I could see the question—

Q. I will ask you if you refused to answer at all there?

A. I did object to answering.

Q. Was an attachment got out against you to compel you to answer?

A. There was an attachment made returnable to the court. I objected to answering on the ground that I supposed it was a collusion with Mr. Day, and I didn't choose to—

Q. Didn't you say that you were not ready to disclose these facts at that time?

A. I am not aware of any such statement.

Q. Was an attachment issued, and were you brought in before the commissioner?

A. No, sir; there was no attachment that I am aware of. I remember there was one issued.

Objection was here made by Mr. Brady to the question as immaterial.

Mr. RICHARDSON said his object was to show that Mr. Judson, when for the first time the question was directly put to him in any of these suits as to the payment of the expenses, declined to answer: that an attachment was issued, and he was brought in upon it, and still he declined to answer; so that if this evidence is material, he has heretofore withheld any statement in regard to the payment of the expenses.

Mr. BRADY. We withdraw the objection if the Court thinks the evidence is material.

The hour having arrived for adjourning, the court adjourned.

TWENTY-FOURTH DAY.

PROVIDENCE, *Wednesday, Feb. 21, 1855.*

**TESTIMONY OF JUDSON, FORD, WARD, CANDEE,
PARMELEE AND ONDERDONK.**

**MR. JUDSON. CROSS-EXAMINATION CONTINUED BY
MR. RICHARDSON.**

Q I understand you that you had not seen Chaffee for several days before you went to Washington; is that so?

A I stated that I had not seen Chaffee since I went to Boston, after I left New York for Boston, till I met him in Washington; that is my best recollection—not till he arrived in Washington, one day after my arrival.

Q How happened he to come on there? Do you remember exactly?

A I presume he came to Washington by my advice, some time before I left New York.

Q Did you advise with him at Washington?

A I have no doubt I saw Chaffee several times at Washington, at the hotel. I don't know that I had any thing to advise about, particularly with Chaffee; there was nothing to be done; all the papers were before the Commissioner.

Q What did you have Woodman there for?

A If you wish me to state the reason why I employed Woodman.

Q I ask you what Woodman was doing at Washington, connected with this business?

A I should not make the statement unless I was inquired of, but I thought he was a suitable offset to Mr. Day, being a blustering man, a man of assurance and a politician; and Mr. Day was to be there and I was familiar with Day's tactics in these matters.

Q There was something to be done there?

A There was a bill before Congress at that time which, I believe, Mr. Turney, the chairman of the committee on patents in the Senate, had charge of, in behalf of Mr. Day, the object of which was, as we thought, prejudicial to all patents and the interests of inventors.

Q Did Woodman have any thing to do about that bill?

A I have no doubt he knew about that bill, and had some talk with his politicians about it.

The Court. We have gone almost far enough.

Mr. Richardson. This is a matter stated by the witness. I only inquired in reference to this proceeding at Washington, what Woodman had to do with this extension.

Witness. I would make a remark here, that the expenses attending the proceedings in Congress were large.

The Court. We don't want any thing about the proceedings in Congress; they have nothing to do with this extension.

Q You thought Woodman was an offset to Day?

A I thought so.

Q You had always found yourself competent to cope with him?

A I never had attempted to cope with Day in that way.

Q Who carried the extension papers to the patent office—the application, evidences, arguments, &c?

A I presume they were sent on by the commissioner, who took them. The commissioners at Boston, I am quite sure, sent them on themselves.

Q. Did you have copies taken of these depositions as you were taking them?

A. I did not have any copies taken of the depositions taken—I think not one in Boston, and I never saw any before Sherman's; Balestier, I think had copies as he went along in that testimony.

Q. You were present when Hutchinson gave his deposition?

A. I was in Boston when he was examined?

Q. Did you ever see it?

A. I never saw it till after the extension was obtained.

Q. When did you first see it?

A. I do not know when; I think I first saw it after I wrote to the patent office for the copies of the testimony.

Q. Wasn't it a settled matter between you, Staples and Chaffee, that you should prove the value of this extension for certain reasons in that case?

A. I do not recollect what the particular conversation was on that subject, but I believe I undertook to prove, or it was undertaken to prove—at all events I supposed it was proper to be proved—the value of the extension.

Q. What was it proved to be?

A. I do not distinctly recollect, but I think the substance of the proof was that it was worth \$100,000 or more; I think so.

Q. Wasn't it estimated at from \$100,000 to \$250,000, or \$300,000?

A. I think very likely; according to my recollection, over \$100,000.

Q. In New York, after you met Chaffee at Staples' house, or when you saw him before you met there, did you tell him at any time, and if so when you had seen and talked with Ford and Hutchinson?

A. No, sir, I had not; I am quite certain that the interview at Staples' house was previous to any interview with Hutchinson or Ford?

Q. Then the interview at Staples' house was prior to any interview between you, Ford and Hutchinson, and you didn't name it to Chaffee at that time?

A. No, sir.

Q. Did you at New Haven, at any time, name to Chaffee your having had an interview with Ford and Hutchinson?

A. I do not recollect that I did—that I named them by name or used their names.

Q. Did you see Goodyear before the 20th day of Sept. 1850, after that extension?

A. I cannot distinctly recollect how soon after the extension I first saw him.

Q. Can you or not recollect whether you saw him before the 20th?

A. I could not state positively whether I did or not; my best recollection is that it was within two or three weeks.

Q. Where did you first see him?

A. I think I first saw him in New York; I am not positive about that.

Q. Did you have a warm time with him when you met him?—acold him?

A. I think before I had seen Mr. Goodyear Mr. Candee had seen him and had explained the circumstances; and when I met him I don't recollect whether Goodyear exhibited any feeling of anger or of great dissatisfaction at what had been done.

Q. You have said that he assented?

A. Goodyear was under a misapprehension at first as to what had been done, but he expressed himself satisfied with what had been done, when he understood it, and that I had no personal interest in it but the rights and interests of himself—that what was intended to be done was effected.

Q. Haven't you sworn to this thing in an affidavit or in a bill filed to which you are a party against Mr. Day? (Reads from the affidavit, wherein Mr. Judson swears that Mr. Goodyear when he assented to, and satisfied the agreement of the 5th of Sept. did so without any knowledge or information as to any negotiation or interview had between Chaffee and Judson in regard to procuring or executing said agreement, or any parole understanding, by which said agreement ought to be construed otherwise than as the terms of it import-

ed, or was to be held as a security, or power of attorney, or otherwise than as a valid transfer of all Obafae's right, bills and interest, &c.)

A. That is all correct; that was intended as a substantial compliance with that agreement and so I stated to Mr. Goodyear.

Q. You so intended?

A. It was intended to carry out his—

Q. You did so state it?

A. That is so stated.

Q. You so state?

A. That is Mr. Goodyear's statement and I suppose it is correct.

Q. Isn't it signed by you?

A. I have no doubt of its correctness and truth, so far as this: If Goodyear makes that statement and I have adopted it as true. I do not know whether the averment is, that Goodyear makes it or that I did.

Mr. BRADY. It states that Goodyear makes it of his own knowledge and the other plaintiffs by belief.

Witness. Then I adopt it as correct.

Q. In an application for a continuance in the case in New York, did you prepare and sign what you supposed would be sworn to by Goodyear and put it on file for the purpose of taking a commission, and file your affidavit connected with it? (handing him a paper.)

A. This was prepared, I believe as some statements which were expected to be proved. I will only state that we were not so particular about it because it was, I recollect, only Mr. Brady's—

Q. Well, didn't you prepare it?

A. I will state this: Mr. Brady when he gave notice—

Mr. BRADY. This is a statement of what it was expected Goodyear would swear to, which they admitted at the trial at New York to prevent the issue of the commission.

Witness. I recollect when these notices were got up there was a great deal of looseness in the manner; we put in more perhaps than could be proved—than it was positively certain could be proved.

Q. Is this your affidavit at the end of it?

A. I have no doubt this is correct (looking at it.)

Q. I wish to know whether you stated this? (Reads from the affidavit where Judson says that Goodyear complied with all his covenants and agreements under the contract of May 28th, 1850, and that the same were not lost, or was deprived of its force and efficacy as a contract or any part thereof but now remains in full force and effect unless the agreement of the 5th of Sept. was substituted for it.)

A. I did make it then.

Mr. BRADY insisted upon reading the whole affidavit and did so; He then stated that certain facts were expected to be proved which the plaintiff in that case acknowledged the witness (Mr. Goodyear) would swear to.

The COURT. But the witness here adopts it as his statement?

Witness. I understand that is substantially correct now; if it is very material I will look at it carefully now.

Q. As to the payment to you and Staples, there was a fund of 15 per cent. that was to be received by you and Staples?

A. Fifteen per cent. of an appropriation by Goodyear on all his tariffs of which Staples and myself were trustees, but which Staples, I believe, never received directly; every thing that he received, came from my hands.

Q. That money was held by Jonathan C. Ackerman?

A. Mr. Ackerman was the trustee of the shoe association, and by the agreement, the 15 per cent. of Goodyear's appropriation was paid by the licensees into the hands of Mr. Ackerman as their trustee to be paid to us.

Q. For certain specific purposes?

A. No, not at all; they had nothing to do; their duty was to pay the 15 per cent.

Q. I only ask you the fact—was the money paid into the hands of Mr. Ackerman?

A. All the 15 per cent. was paid. I must qualify that a little. That was so in regard to the shoe associates, and Mr. Ackerman was the medium through whom the shoe associates and shoe licensees paid this trust money into my hands; but in regard to the other licensees the money came directly into my hands.

Q. Contrary to the contract?

A. Why, there is a distinction between the shoe associate licensees and the other licensees.

Q. In the contracts in the case?

A. There are contracts in the case which show—

Q. I don't want you to give any construction to the contracts?

A. I am not giving any construction, but you do not seem to understand this. There were other licensees than the shoe associates, and as to those licensees this trust money came directly to me.

Q. I am not asking you about the shoe associates' 15 per cent., except this question: Did you ever draw any drafts on Jonathan C. Ackerman? You can answer that?

A. I will answer it fully, the only difficulty is, you don't understand precisely.

The COURT. Answer that question in your own way.

WITNESS. According to our construction.

MR. RICHARDSON. I submit that I must have an answer.

WITNESS. I will state this, if you want it without any explanation, and then you may get it: I presume I did draw drafts on Ackerman. It was treated as a common fund of Goodyear and the shoe-associates, and drew drafts on the whole; that is to say, the 15 per cent. of Goodyear's appropriation, and the 15 per cent. of the shoe associates' appropriation were a common fund from which I drew drafts, and my disbursements were made from them without any separate account being kept of either.

Q. Of the two funds?

A. Of the two funds.

Q. You drew drafts?

A. I have no doubt I drew drafts but the payments were generally made to me by Mr. Ackerman in New York.

Q. You don't distinctly recollect?

A. Made at Grecean's store when he was there.

Q. I want to fix one fact—whether you drew drafts or not; if you know you can say so?

A. I think I have drawn drafts on Ackerman.

Q. Didn't you and Staples both jointly draw drafts on Ackerman and both sign them?

A. At the beginning of the trusteeships between myself and Staples, possibly, and I think very probably, Mr. Staples joined with me in some drafts; but that was only for a short time. Mr. Staples never drew any money from Ackerman or received any except by my authority. It may have occurred a few times that he united with me in a draft, but afterwards I received all the money and what Staples received he received from me.

Q. Didn't he join with you on the drafts up to the spring of 1850—to April?

A. I do not think he did.

Q. Can you tell the time when he ceased?

A. I am not quite certain, but I do not think it was more than a year, certainly, that he united with me in any draft.

Q. Did you draw any drafts yourself prior to the execution of that agreement by which you were to draw drafts?

A. The creation of the trust fund and trusteeship was all, a simultaneous act on the 1st of July, 1848.

Q. From the 22d of May, 1852, till the 16th of Sept. 1850, did you in your personal name draw any drafts upon Jonathan C. Ackerman?

A. Well, I cannot distinctly say, I do not believe I did. In regard to that Mr. Candee has Mr. Ackerman's papers, and if there are any drafts they are in his possession at this time.

Q. You don't recollect that the associates passed a vote at a meeting in 1850, 1, 2 or 3, that all the drafts drawn by you theretofore, should be taken and accounted the same as though Mr. Staples had joined in them?

A. Well, I do not recollect; there was some vote of some kind in regard to the matter, that all my previous drafts or drafts of the trustees on the fund should be considered as sufficient accounting, without any more investigation, in 1851, perhaps. That vote is here, no doubt, on Mr. Candee's books and you can refer to them if I am in error.

Q. These four associates kept books of record, did they not?

A. They did.

Q. And made their business matters, matters of record?

A. Yes, sir.

Q. Kept regular books?

A. Yes, sir; I presume they did. Mr. Ackerman was a very accurate man.

Mr. BRADY here offered what purported to be a copy of that resolution which Mr. Richardson declined to take.

Q. Did you not present yourself, with your own hands, certain drafts said to have been drawn by you, on Jonathan Ackerman, in the summer or spring of 1850, in the course of the trial of Day and Candee, on the motion for injunction?

A. I do not recollect now what you allude to.

Q. Do you remember hearing a record read there of the four associates?

A. I think there was a record there of the four associates. I do not know precisely what you allude to. If you will call it to my mind by any paper, I will give you all the recollection I have about it. You are asking me about things that are not very distinct to my mind. If you will show me some paper that will bring it to my mind, I will give you an answer.

Q. I have not got any that I am aware of; you recollect that trial distinctly?

A. I do.

Q. Don't you recollect that one point made upon your side was, that certain drafts were drawn by you on Mr. Ackerman; and don't you recollect the purpose for which you used those drafts in the case?

A. I do not now recollect what you refer to.

Q. Did Mr. Ackerman keep books?

A. He did; the books are here, I presume; he kept a record of all the transactions between myself, himself, and the shoe associates, of the trust fund, and every thing pertaining to it was very carefully and accurately kept, and will be found, I have no doubt, in his books.

Q. Mr. Staples received his proportion of what he was entitled to under these contracts at the time you made a new bargain with him?

A. Yes, what he was entitled to.

Q. He received his proportion?

A. No; I think he was paid for his services by me. He did not receive his appropriation of Goodyear's 15 per cent., because that I think, was insufficient to pay him, and the 15 per cent. of the shoe associates was resorted to, to pay Staples for his services up to the time he agreed to receive \$3,000 a year for his compensation.

Q. Do you mean to say, in your testimony in chief, that between you and Staples, in any settlement you ever made, or payment you ever made, this Chaffee extension was particularly and especially taken into consideration, and accounted for and talked of?

A. I mean distinctly this: Mr. Staples' duties to Goodyear and his licensees were precisely the same as mine, as I understood it, and my duty was, to render these services—to do this business in relation to Goodyear's patent—to give my services, and not to do any thing which would conflict with our interest in that respect. Mr. Staples agreed to accept \$3,000 a year, and render and discharge the same duties that he had obligated himself for in his contracts with Goodyear and with me.

Q. Will you please answer my question?

A. And the services in regard to the extension were precisely like the services in regard to any other of Goodyear's matters.

Q. In your judgment?

A. In my judgment.

Q. What I want to get at is, whether there was any thing particularly said about this patent?

A. No special allusion or any thing particularly said about it whatever.

Q. You gave Mr. Staples some notes, did you not?

A. I gave him \$5,500, I think; it was not quite \$6,000, the two notes put together.

Q. Have those notes been paid?

A. I stated the transaction in regard to those notes; shall I state it again?

Q. I want to understand it a little better. Were those notes put in the bank for collection?

A. Shall I state?

Q. You will answer my questions one by one.

A. Very well; Mr. Staples got these notes discounted in the bank.

Q. Did he indorse them?

A. He did.

Q. Was there any other indorsement upon them?

A. My indorsement was upon them; that is to say, the note was made by me payable—I am not certain about that—either at my order or Staples'; if it was my order, my indorsement was on it.

Q. Did you procure any body to take them out of the bank?

A. I procured a person to purchase them out of the bank.

Q. Did you procure Williamson afterwards to see Staples upon them?

A. They were purchased at the bank, and Mr. Staples was sued by the holders of the notes.

Q. By Williamson?

A. Whoever it was; whatever name the suit was brought in, Mr. Staples was sued.

Q. The suits are now pending?

A. Two suits are now pending.

Q. One in Conn.?

A. One suit is not pending. No, they are both in N. Y. city.

Q. Didn't you see Staples and arrest his body in Conn., on one of these notes?

A. No, sir.

Q. He has never been paid?

A. I think the suits are in N. York city.

Q. Have you been sued on them?

A. No, I have not been sued on them. I do not know that I have a right to state—

Q. You will have all the opportunity to make answers you want. Who drew the application for this extension?

A. I drew it, I think; at all events I think I did in connection with Mr. Staples. I either drew it or copied the draft.

Q. Was it dated back anterior to the time it was drawn?

A. I have no recollection of such a circumstance as that. I don't think it could be. I think the files of the patent office will show when that was received, whether it was so or not. I think there is a letter of Staples stating when he received that application, there in Washington at the time.

Q. He was in Washington at the time?

A. I think there is a letter of Staples' which shows whether that is so or not.

Q. Did Chaffee have any legal adviser other than yourself, from May to September, 1850—any other lawyer?

A. Mr. Staples and myself acted, in getting the extension, so far as he had any interest in it—

Q. Did Chaffee have any body else?

A. I don't know of any body else.

Q. Did you know of his having any body from September, 1850, till November, 1851?

A. I didn't know of any lawyer whom Chaffee consulted with.

Q. Did you know of his consulting with any body?

A. I didn't know of any except his statement to me some time after the extension, that he consulted some lawyer in New Haven.

Q. Didn't you very warmly and urgently advise Chaffee that it was for his interest, and best for his interest, to make this paper of the 5th of September?

A. I did believe it was best for him.

Q. Didn't you advise him warmly and urgently that it was for his interest and best for him to do it?

A. I think I did tell him it was for his interest, and best for him as well as all the parties.

Q. When did you last see Goodyear?

A. The last I saw of him was the day before I left England for this country.

Q. When was that?

A. October 12 or 13, 1854.

Q. How much stock do you own in the New England Car Spring Company?

A. About, I think, \$150,000.

Q. How much money have you ever paid into the company?

A. There has not been much received.

Objected to as a private affair.

Mr. JENCKES. The gentlemen asked this witness what he got for this license of the New England Car Spring Company, and he answered not one dollar; now if he did not pay any money into that concern, it is very material to know it.
Question allowed.

Q. Will you state how much you paid for this stock?

A. At the precise time when this license was given I do not know whether the merger between the Metallic India Rubber Company and the New England Car Spring Company had been perfected—whether every thing had been done. I paid about \$8,000 for my interest when the Metallic Rubber Company was started in 1849. When the Metallic Rubber Company was merged in the New England Car Spring Company, in the Metallic Company there were four owners—Mr. Upham, Mr. Ray, Mr. Ely and myself; all except myself were the principal and almost the only stockholders of the New England Car Company. I was not the owner of any stock in the New England Car Company at all; but when the two companies were merged and when the New England Car Spring Company was organized we took our proportion. I took a portion of the stock and the others received their portion according to their interest in the company.

Q. That is the way you got your stock. How many other parties were there interested at the time of the organization of the New England Car Spring Company?

A. The stock was of the nominal amount of \$500,000. A great many new stockholders were brought in and great efforts made to sell the stock by Mr. Ely and Mr. Ray, and a great deal of it was disposed of.

Q. But before the sale of the stock you, Ely, and Ray were the principal partners?

A. Before these sales Mr. Ray and Ely were almost altogether the owners—perhaps owned threefourths of the stock, or more.

Q. How soon after you granted this license did Mr. Ray, if he did at all, turn round and convey his stock to you into the hands of Ely?

A. About three years afterwards Mr. Ray sold this stock to various parties—some of it to me and some of it to three or four different persons.

Q. You have never sold yours?

A. I never have parted with any of my stock, but Mr. Ray sold his and went into business, being dissatisfied with the company, manufacturing springs to compete with this company.

Q. Did you ever pay in more than \$8,000?

A. I paid the money for every dollar of the stock I received.

Y. Did you ever pay in but \$8,000?

A. I paid the money for every dollar of stock—the full value of it.

Q. How much money have you paid in?

A. I have paid the full amount.

Q. How much did you pay, and to whom did you pay it?

A. To Mr. Ray, for his portion, and to those for whom I purchased the stock.

Q. Have you paid \$20,000?

A. I have not received a dollar for stock, for which I have not paid the full value and consideration in some way.

Q. Have you paid \$20,000 in money?

A. I have paid in money for the stock which I have received.

Q. Have you paid \$20,000?

A. Yes, over \$20,000. I cannot specify the amount, but every—

Q. Have you paid \$30,000?

A. I have paid over \$30,000. I do not wish to begin to answer your questions all the way up, because I can give you an answer by looking at my papers and tell you exactly how much I have paid.

Q. You can tell within thirty or forty thousand dollars?

A. I do not wish to answer your questions as to particular amounts; if you want a definite answer I will give it to you in a few minutes.

Q. I want to know if you have paid \$50,000?

A. My answer I should think would be sufficient that I paid for all the stock I received. If you want me to be more particular about that I will take my time before I can answer.

Q. (By the Court.) The question is, in money, you answered as to that, but you did not answer how much.

A. I will state that the company paid me tariffs, and when I speak of paying money to a certain extent, there was an account between me and the company and in the payment of tariffs; that was called money as far as it went in the purchase of stock. My contracts are here in regard to in evidence. And that is what I mean by the payment to a certain extent of money; I mean there was an account, and when that was in my favor it was called money. I mean by that the payment of money as far as it went, if any stock was purchased in that way.

Q. Your original \$8,000 you had in the Metallic Company went in; that was paid in money before the organization of the New England Car Spring Company?

A. Yes, sir.

Q. What is the par value of the stock of the New England Car Spring Company?

A. The stock was originally \$500,000, but it was cut down to \$250,000 and the last sales of the stock.

Q. What is the par value?

A. The par value is \$250,000.

Q. A share?

A. I forget how many shares there are.

Q. Is it \$100 a share?

A. They are \$25. Mr. Ward is here and he can tell you all about it. The last sales of the stock was at \$180 and they have not declined or advanced any for two or three years.

Q. Do you remember that paper (hands him a paper?)

A. This is the Malden license, I suppose.

Q. Did you sign such a paper as this?

A. I presume I did. I signed the license of the Malden Company.

Mr. RICHARDSON proposed to read it.

Mr. BRADY objected and said that the original paper must be produced with the subscribing witness.

The Court said he had ruled yesterday that that was not required.

Mr. BRADY. Then I will waive even that; but it is irrelevant to the case.
The COURT. You wish me to note that you object on account of irrelevancy.

The WITNESS here stepped back upon the stand and said: You ask me what I paid; I am prepared now to tell you. I am safe in saying, \$100,000 in money.

Q. Including the tariffs?

A. Independent of any tariffs.

Q. Cash paid in?

A. Cash paid; I am satisfied over \$100,000 at least—\$150,000 of stock.

Q. (By the COURT.) You have what you consider worth \$150,000; you speak of the present par value?

A. Without reference to the value of the stock, I say I have paid in money for stock.

Q. (By the COURT.) That is not the question, but what is the stock you now have worth? Did you speak of the par value or its present value?

A. I spoke of its present value. It is less in value now than when I purchased a large portion of it. I paid at the rate of \$200 for stock which has since been sold for \$180.

Q. Is that your signature? (handing him a paper).

A. It is.

Q. Is that a copy of what you said?

A. I presume this is correct.

Q. Did you state, in an affidavit made in the progress of the case of the New England Car Spring Co. in New York this: "This deponent further says that the said agreement between said Goodyear and Chaffee was in full force and virtue until the 5th day of September, 1850, but was treated as null and of no effect after the execution of the said agreement with Chaffee?"

A. I did.

Q. Does that stock now stand in your name?

A. It does.

Q. Did it at the trial in New York?

A. It did; that is to say, a large portion of it; some of it stood in the name of Mr. Ray; perhaps it had not been transferred by him. It was transferred to Mr. Ely, to be transferred to me on the completion of all the payments.

Q. Has it ever been transferred at all to you?

A. Probably it has. It has been paid, every dollar, I presume, up to this moment.

Q. It stands clearly in your name?

A. I have no doubt it does; it ought to be so.

Q. Between the extension of the Chaffee patent and the 6th day of July, 1858, did you commence any suits for infringement of it?

A. I have no recollection of commencing any suit in the world on the extension; I should be very much surprised to find—

Q. No recollection of any suit?

A. None whatever; I should be very much astonished to find my memory is so bad as that.

Mr. JENCKES here read the Malden Company license.

Q. How much stock did you receive at the organization of this Malden Company?

A. I do not recollect now; myself and the shoe associates took one half of the stock; the shoe associates and the licensees took one half, and I took my proportion, say one eighth; and I took my proportion, I think, with the other associates and licensees.

Q. Do you know how many shares you got?

A. I cannot state the number of shares exactly, but the amount of money paid in I can state. I have had so little to do with the company that it is out of my mind.

Q. How many shares?

A. I do not recollect now what the nominal amount of the shares was. I

took so little interest in it that I paid my notes, and that is all I know about it.

Q. Don't you know you had a hundred shares?

A. No, I think not; I can tell you, perhaps, by referring to some papers.

Q. You don't think you had a hundred shares?

A. I cannot state now; the amount was something like \$10,000, I think, that was paid in,—ten or fifteen thousand dollars.

Q. That you paid?

A. I myself paid the money, and lost it.

Q. Who else put in money?

A. The shoe associates and licensees paid; the company was unfortunate.

Q. You were all interested in that company,—the shoe associates, Hartshorn, and yourself?

A. Yes, sir; and the licensees. I can tell you the amount of money, but the nominal amount of the shares I cannot tell; I think the shares were never assigned; I recollect paying the money very well.

Direct resumed by Mr. Brady.

Q. Was Dr. Hartshorn interested in that company?

A. He had his proportion of the stock as a licensee in that company, I think. My impression is that the licensees and associates each had an interest in the stock in that company.

Q. Do you know that Hartshorn took any stock in that Malden Company, or whether Hayward took any for Hartshorn, or for his own account?

A. I know this: that Hayward has owned that stock since, and the understanding was that Hayward was to have it.

Q. Had Hartshorn any interest in it?

A. I do not know that he had any interest in it at all; I know Hayward has always owned it.

Q. What does the New England Car Spring Company manufacture?

A. It manufactures springs for cars, engines, and locomotives, and hose; and it has an exclusive right from Goodyear for the manufacture of car springs, and a concurrent right for the manufacture of India rubber hose.

Q. Does it manufacture any other article?

A. It does not, to my knowledge.

Q. It manufactures car springs under Goodyear's and what other patents?

A. Under all Goodyear's patents.

Q. And Ray's patents?

A. And Ray's patents.

Mr. BRADY wished to put in Mr. Ray's patents, but they were ruled out by the Court.

Q. Did you, directly or indirectly, in any way whatever, in any transaction with the New England Car Spring Company, or in company with the association, out of which it sprung, receive any compensation for that company's use, of the so-called Chaffee machinery or process?

A. In no way whatever, to my knowledge.

Q. That Car Spring Company, you have told us, was merged into a company, which has been called the New England Car Company?

A. Yes, sir.

Q. And that New England Car Company resulted from another proceeding it, which had been called the Metallic India Rubber Company?

A. Yes, sir.

Q. From which of these companies did you first obtain the interest that carried you down to the Car Spring Company?

A. The Metallic Company I became interested in in 1849, which was subsequently merged in the New England Car Company, in which I was not interested.

Q. And succeeded in the New England Car Spring Company, in which you were interested?

A. I so became interested in the Car Spring Company; all these were merged in one company.

Q. Did you in any way receive any compensation or consideration for the making of this license to the Car Spring Company?

A. I did not.

Q. From no source or quarter?

A. From no source or quarter.

Mr. BRADY here wished to read the whole of an affidavit of this witness, sworn to in December, 1858, from which the other side read a passage.

The Court ruled that he might read such portions as related to what had already been read from the same affidavits.

Mr. BRADY accordingly read certain portions of it; also, a certain portion of an affidavit made at Newport.

Q. You were asked whether the value of the patent was proved at the time of the extension on the extension proceeding, and you stated the amount it was proved to be worth; who proved it? who was the witness that swore to the value?

A. I think some witnesses in Boston testified to its value.

Q. Was Chaffee examined on that subject?

A. Chaffee made a statement, in some paper, in the case of the value of it, I believe.

Q. You have been shown a paper, containing what it was expected Goodyear would swear to in the New York case; did the attorneys in that case admit that Goodyear would swear to that?

(Objected to.)

Mr. BRADY wished to show that that was treated on both sides as a mere offer, and not proof.

Mr. RICHARDSON. Your Honor will recollect that the paper was signed by Judson, and had his signature if not his oath.

Mr. BRADY then offered to read the complete paragraph, a portion of which was read on the other side, which the Court allowed him to do.

Q. You were asked as to the last time you saw Goodyear in Europe; that was on the 12th of October; you had been in Europe then how long?

A. About two months or more.

Q. When you went to Europe did you see Goodyear there?

A. I did.

Q. Where was he? in what part?

A. He was in Paris when I arrived in England.

Q. When did he return to England from Paris?

A. I think he was in Paris,—perhaps in Belgium.

Q. On the Continent?

A. On the Continent.

Q. When did he return to England?

A. I should think about one week before I sailed to this country; I left on the 14th of October.

Q. And he was on the Continent except for one week before you were leaving; what was the state of his health?

A. He was very feeble, and came very near dying,—was supposed to be dying.

Q. I asked the state of his health before, I think?

A. He was very feeble, and unable to attend to scarcely any business.

Q. Look at that paper, and see if it is a copy of the vote of the associates that Mr. Richardson inquired about? (handing him a paper).

(Objected to; question allowed).

Q. Were you present when that vote was taken?

A. Yes, sir; I presume I was.

Q. Is that original book of entries here?

A. It is.

Q. Who has it?

A. I think I have seen what I supposed to be that in the possession of Mr. Candee.

Mr. CANNON, in reply to a question put to him in his seat, answered that he had brought it down with him.

Q. You have been asked about a litigation between you and Mr. Staples on those notes; when you purchased them out of the bank did the money go to Mr. Staples?

A. These notes had been discounted in the bank, and Mr. Staples had received the money.

Q. And he has got it in his possession?

A. Yes, sir.

Mr. RICHARDSON. And got sued on them.

Q. What was the cause of that?

(Objected to, as inadmissible.)

Q. I will ask simply what is the pretence upon which these suits were brought?

A. I will state in one word. It was found to be impossible to get along with Mr. Staples in harmony with the other counsel in the cause; and we took the advice of the other counsel, and, under their advice, I went to Mr. Staples, and had a settlement with him of his account; and in that settlement I paid him up to that time his quarter's payment.

Q. (By the Court.) State whether that suit was brought with a view of ripping up that settlement.

A. And, I was going to add, I paid Mr. Staples \$3,000 in addition. The agreement was that this contract which I had with Staples for his services should be given up; but Mr. Staples stated that he wanted to use the notes, I gave him them, and afterwards when I called for the contract he made some other condition, and had forgotten or did not remember the agreement as I did, and yet claimed to hold the notes; and in order to bring it between himself and me, the notes were purchased out of the bank, so that he might make his claim on me with regard to the notes if he paid the notes—so that the equities between myself and Mr. Staples could be settled.

Mr. BRADY. The claim is, that when Mr. Staples received these notes he was, in consideration of them, to give up the agreement which gave him a salary of \$3,000, and that he did not do it in pursuance of that bargain, but claimed to hold on to both the agreement and the notes.

Q. You were asked what other lawyer did Chaffee employ than you between the 28th of May, 1850, and 12th of November, 1851; did you do any law business for Chaffee in that period?

A. I never did any law business.

Q. Were you ever consulted or did you ever advise him on any question in relation to this contract, or whatever?

A. I never was in any business whatever.

Re-cross-examined by Mr. Richardson.

Q. Do you know what Mr. Staples claims about your conduct in that matter of these suits?

A. No, sir, I have not had any interview with him, except the quarrel between us growing out of that transaction.

Q. Have you seen what he has set forth on the records of this case?

A. I never have seen any.

Q. Do you know the recital he gives of your conduct in that matter—any thing about it?

A. I never heard it; I think it is very much to the disparagement of Mr. Staples—that transaction.

Q. Do you know how much that Hayward stock was in the Malden Co.?

A. Upon reflection, I think I am wrong; I didn't take any stock as one of the licensees, I purchased it of Hubbard and paid him for the stock. I don't know how much stock Hayward had.

MR. FORD RE-CALLED AND EXAMINED BY MR. BRADY.

Q. At the time of the extension of the Chaffee patent you were one of the firm of Ford & Co.?

A. Yes, sir.

Q. After the extension was obtained, did you have an interview with Judson upon the subject of obtaining a title to that extension?

A. I did.

Q. About what date was it?

A. It was about the 1st of September, I think.

Q. Where was it?

A. In his office.

Q. Besides yourself representing one of the associates, who were present at that interview?

A. No one, but Judson at that time, as I recollect.

Q. State what it was?

A. I think Mr. Judson stated to me that Chaffee's patent had been extended and that he had just returned from Washington, and was then in the city; and he further stated that it would be, he thought, better for all the parties concerned that Chaffee should convey his patent in trust; and he suggested, I think, himself as the proper person to be made trustee. He also said that a salary or compensation would be necessary, and he advised that it should be in the form of an annuity or salary. And I asked him what he thought would be proper—something to that effect, I think he suggested, probably, \$1,200. That is my impression. And he wanted me as one of the associates, to authorize him to make such an arrangement, and to pay it from the fund. He said, too, that it was important to decide the matter at once. And I think I then left, and went and had a conversation with Hutchinson, President of the Newark Rubber Co., one of the associates, and talked the matter over with him, stating the conversation I had had, and we went together to his office, and on the part of the associates, authorized him to make such an arrangement, we acted or assumed to act for the others if necessary. That is about the substance.

Q. Did Chaffee call upon you after that?

A. He did.

Q. About how long?

A. It was some days afterwards—possibly weeks—perhaps two or three weeks; I am not sure.

Q. Where did he call upon you?

A. At my office, in New Brunswick.

Q. What did he call for?

A. He presented a letter from Mr. Candee, with a draft on Ford & Co.

Q. What did he say?

A. My recollection of the conversation is indistinct.

Q. The substance of it?

A. He presented this letter and draft, and stated, I think, that Mr. Candee had made the arrangement for his accommodation. I will not be positive; that is my impression was the substance of what he said. The letter, I think, explains the object.

Q. Accommodate him for what, did he say?

A. My understanding?

Q. The substance of what he said.

A. I have stated the substance so far as I can recollect.

Q. Did you make to him any payment?

A. I did.

Q. How much?

A. I think it was \$375.

Q. What was that for?

(Objected to as a legal conclusion.)

Q. (By the Court.) What did you understand it at the time?

A. I can only state my understanding.

Q. (By the COURT.) How did you get the understanding?

A. I suppose, from the letter of Mr. Candee and what Chaffee stated.

Q. (By the COURT.) Then you can state what Chaffee did state?

A. My knowledge of what he stated is indistinct. I can only say I think he stated that the object was to accommodate him—that Mr. Candee had made this advance to accommodate him.

Q. What advance?

A. The advance of \$1,500, as an advance on his salary or annuity. I so understood it.

Q. Look at this check (handing him a paper).

A. That is my check.

Q. Did you give that check to Chaffee at the time?

A. I presume—I am sure I did.

Q. Is that the proportion of your company of the \$1,500?

A. Yes, sir.

The check was dated Sept. 20, 1850, and payable to the order of E. M. Chaffee.

Q. Was that the first money you had contributed towards the payment of Chaffee?

A. That is the first payment of the annuities on the extension.

Q. What became of that letter from Mr. Candee?

A. I sent the letter with these papers in Mr. Candee's suit, I think. They were requested. I think I have seen it in court and heard it read.

Q. Did Chaffee ever apply to you take any license to use his extended patent?

A. He never did.

Q. In any way directly or indirectly?

A. No, sir.

Q. Did you see Chaffee frequently between the 5th of Sept., 1850, and this transfer to Day?

A. Very seldom.

Q. Did you see him occasionally?

A. I presume I have.

Q. You saw him at Trenton?

A. I recollect of seeing him there.

Q. You were present at the execution of this license of the Malden Co.?

A. I recollect being present.

Q. Who prepared it?

A. I think Mr. Gardiner G. Hubbard.

Q. At whose suggestion was the ninth clause put in? (Reads it.)

A. I recollect Mr. Hubbard made a great point about having some distinct provision to prosecute the Chaffee patent—of having some distinct fund—Objected to.

Mr. BRADY stated that it might have an important bearing upon the intent of the parties at the time, and to show at whose suggestion it was put in.

The COURT admitted it, not seeing its relevancy, but supposing it might have reference to other matters.

Q. Did Mr. Hubbard write it?

A. I do not know that he wrote it; my impression is that he came in the meeting with a license of his own drawing up, or done at his request. I am not acquainted with his writing; I know he was very tenacious of his lawyer opinions, and we fixed the matter very much to suit him.

Q. You remember the agreement to give a license which was read yesterday; where was that made?

A. In Judson's office.

Q. At whose request?

A. Dr. Cole, of Newark, treasurer of the Newark Rubber Co., I think it was at a meeting to make a license to the Malden Co.; and it arose from the particularity of Mr. Hubbard in having his license made. Dr. Cole was of the

opinion and anxious that we should receive a written license for the Chaffee patent, and he insisted upon it strongly, and that was the result of it; and the paper was drawn up, I recollect very distinctly he wished the license made out at once, and that was the reason that the paper was drawn up. That is my recollection.

Q. Who drew up that paper?

A. Mr. Judson.

Q. Did Judson tell him, in answer to his demand for a license, any thing about it?

Objected to.

Mr. BRADY wanted to show that Mr. Judson told them all that no license was necessary, and that the paper was made merely at the solicitation of Mr. Cole.

The Court admitted the evidence to rebut any use that might be made of the transaction on the other side in the agreement, to show Judson's conduct in the matter.

Q. When Mr. Cole was making this urgent claim, what did Judson or any of your licensees say?

A. Mr. Judson stated, I recollect very distinctly, at that time and at many times, that no license was necessary; and we always so, I always so understood it.

Q. And that was stated at that time?

A. Yes, sir; I have no doubt about that.

Q. Was any demand ever made of you by Chaffee, or any one in his behalf, in any manner, to pay any alleged arrear of annuity?

A. No, sir.

Q. Were you in any way notified or given to understand before this transfer to Day, that Chaffee claimed to be paid something which remained due?

A. I never had.

Q. No notice of it of any kind?

A. No, sir.

Q. When did you first know of the execution of the paper of the 12th of Nov., 1851?

A. After the sale to Mr. Day.

Q. Never heard of it before?

A. Never heard of it before.

Q. Were you present at the vote in regard to that Ackerman matter and Judson's drafts, of Sept., 1850, I believe it was? Do you remember that vote?

A. I recollect I had a great deal of conversation with Mr. Ackerman about it, he being my townsman. He was a very precise particular man. He is now dead. He was my neighbor and friend. I was the means, perhaps, of having him made trustee, because he was a very particular and precise business man; and I recollect of his talking with me about the looseness of paying money.

Q. I want you to come to any meetings at which a resolution was passed upon that subject.

A. I think there was a vote, and I think it was at the request of Mr. Ackerman.

Q. When did he die?

A. I think it is over a year ago.

Q. And then Mr. Candee was made treasurer in his place, and has so acted ever since?

A. Yes, sir.

Q. Did you see Goodyear between Sept., 1850, and Nov. 12th, 1851, frequently?

A. I presume I did see him very often.

Q. In the draft on you from Candee for this \$375, the words "charge to C. E. C." occur, what did those letters mean?

A. I can state what I understood them to mean—the Chaffee extension contract.

Q. You saw Goodyear after the agreement of Sept., 1850; when was it?

A. I saw him repeatedly afterwards.

Q. I refer to the time when you had a conversation with him about that agreement.

A. I recollect of meeting him and having a conversation with him.

Q. When was it?

A. I should say it was from one to two or three months afterwards.

Mr. RICHARDSON inquired the object of this evidence.

Mr. BRADY said it was to show the adoption by Goodyear of the contract of the 5th of Sept.—his statement to these licensees on the subject of his approval of it.

Objected to; objection overruled; exception taken.

Q. Be good enough to state that pointedly to the jury.

A. Mr. Goodyear remarked to me that ~~we~~ had been taking the responsibility, or "you have been taking the responsibility." I asked him to what he alluded, and he spoke of the contract with Chaffee.

Mr. RICHARDSON. That is getting in his construction of it.

The COURT. I do not so understand it.

Q. Go on.

A. The substance of my reply was, we thought it was best for all parties, for all concerned—best for him and us, and he admitted that and made no objection to it, only that Mr. Chaffee—I think it was in rather a pleasant manner in the opening of the conversation; but my impression is, shaking his finger—"but I am astonished that Chaffee would make the contract without my knowledge;" he put it on the ground of courtesy.

Mr. RICHARDSON. Now I object to that testimony—first to the question and then to the testimony.

The COURT. I admit it with the same view; I have noted the objection.

Cross-examined by Mr. Richardson.

Q. Did you give two affidavits in the motion for injunction, in the case of Candee & Co.?

A. I think I did.

Q. Were you a witness in N. York?

A. I was.

Q. Did you, either in your affidavit or in your testimony, in N. York, say any thing about any statement of Chaffee?

A. I can answer; I did not state it.

Q. Did you state any impression of yours that you were paying that money in advance of the instalments?

A. I did not; I will give the reason. I was very desirous not even to state the whole; I did not wish to seem to overstate, it was in my mind fully, but I doubted whether I had better swear to it. I have not now stated all the conversation that was in my mind, but I stated as much as I was willing to give as my decided recollection.

Q. (By the COURT.) In your interview with Chaffee?

A. Yes, sir; in New Brunswick.

Q. Will you state upon your oath that Chaffee said one word to you in relation to the object of that payment when he came into your place?

A. That is my opinion.

Q. I ask you if you will state positively upon oath that he said one word to you upon the subject of the object of that payment?

A. I stated to the best of my belief and recollection; I have not stated positively.

Q. That he said any thing about it?

A. But I will state that I believe he stated decidedly, he did.

Q. Are you certain you didn't get all your impression from the letter which accompanied that draft?

A. No, sir; I am satisfied, I had some conversation with him.

A. But you don't recollect what that conversation was?

A. Only I am willing to state that that much was stated to the best of my knowledge and belief.

Q. What has become of that letter?

A. I sent it to Candee. I was under the impression that it was read the other day—that letter with the “O. E. O.”

Q. Have you seen it since you sent it to Candee?

A. I have not.

Q. Did you see it in New York?

A. I think I did.

Q. You have not seen it here?

A. No, sir; only I was under the impression that that was the one. I would say further with regard to the interview with Goodyear, that I stated, after I left the witness stand, to one of the lawyers that fact—that I did not doubt that I got the impression from this interview with Chaffee. That was my first appearance on the stand.

Q. Is that the letter you received from Candee? (handing him a letter.)

A. I think it is a copy of the letter—the substance—no doubt it is the same.

Q. Isn't that the original?

A. No, sir; it is not the—

Q. Do you know it is a copy?

A. The substance is the same, I have no doubt I must have compared them.

Q. (Reads it.) Is that a copy?

A. I think so.

Q. Did that come sealed to you?

A. I do not recollect; Chaffee brought it.

Q. Did you read it in the presence of Chaffee or to him?

A. I have no doubt I did, in his presence; I do not know whether I read it aloud—when he was in the room.

Q. Are you sure that Chaffee ever saw that letter?

A. I have no doubt of it; he brought it.

Q. Did he read the contents?

A. I cannot say.

Q. Had you seen at that time the contract of the 5th of September?

A. I cannot say that I had.

Q. When can you say you first ever saw that contract?

A. I do not know that I could state that.

Q. Did you ever see it before Mr. Day purchased from Chaffee?

A. Yes, sir; I recollect that.

Q. Can you recollect when?

A. To see how the thing was conveyed; to see whether we wanted a license.

Q. When did you look at it?

A. No doubt within a year after—perhaps within three months—I will not be positive—but before the conveyance.

Q. Did you know anything about what the contract was except what Judson told you prior to his making it, after the extension?

A. When I paid this money to Chaffee?

Q. Yes.

A. I presume I had not seen it; I have no doubt I had not.

Q. In the book of records of the associates, did you enter all your important business?

A. I think so; that was the custom.

Q. Have you seen that book since you have been here?

A. No, sir.

WM. W. WARD SWORN, AND EXAMINED BY MR. BRADY.

Q. What is your business?

A. I am a merchant.

Q. Dealing in what kind of goods?

A. India rubber goods.

Q. In the city of New York, at what place?

A. 102 Broadway.

Q. And have been how long?

A. For seven or eight months on my own account.

Q. Before that how long had you been in the business?

A. Eight or nine years.

Q. I want you to state briefly about this New England Car Spring Company, were you connected with them in any way at any time?

A. I was the secretary of the company from the time of its formation till I left.

Q. A stockholder at any time?

A. A stockholder, also.

Q. When was it formed?

A. In 1851.

Q. What was the company or association that preceded it?

A. There were two companies—the New England Car Company, and the Metallic India rubber Company.

Mr. RICHARDSON. What does the gentleman expect to prove?

Mr. BRADY. That the pretence that Judson received anything for the license to the Car Spring Company is utterly unfounded.

The Court allowed the witness to state what he knew about this matter.

Q. How long did the two companies—the Car Company and the Metallic Rubber Company exist prior to that?

Objected to, but objection afterwards withdrawn.

Q. State when Judson first to your knowledge became interested in the business which resulted in the establishment of the New England Car Spring Company.

A. In 1848 Judson was a partner in the Metallic Rubber Company.

Q. Did he continue connected with that business till it passed into the New England Car Spring Company?

A. He did.

Q. Can you tell the jury the extent at the present time of Judson's ownership of stock in the New England Car Spring Company?

A. I think he owns about \$150,000 or \$120,000 worth.

Q. At its par, or present value?

A. At its present value.

Q. Did the New England Car Spring Company, in any way directly or indirectly, by its own act, or through any individual, give any consideration to Judson or any person acting for him, for that license of the New England Car Spring Company?

A. They never did.

Q. Were you cognizant of the making of that license at the time it was made?

A. At the time it was made?

Q. Did you know Mr. Chaffee at that time?

A. I did.

Q. Had you seen him at the establishment of the New England Car Spring Company?

A. I had.

Q. Frequently or otherwise?

A. Not very frequently.

Q. Was he there about the time when that license was made?

- A. He was.
- Q. Whom did he come to see, or with whom was the conversation?
- A. With Fowler M. Ray, then president of the company.
- Q. Did you hear their conversation?
- A. I did not.
- Q. No part of it?
- A. No, sir.
- Q. Were you present at the time that license to the Car Spring Company was actually executed?
- A. I think I was.
- Q. Was Chaffee there then?
- A. I do not remember.
- Q. Can you state to the jury of your own knowledge how the \$20,000 was mentioned in that license to the New England Car Spring Company?
- A. The old New England Car Company, in the formation of the new, was put in at \$400,000, and the Metallic Rubber Company, at \$100,000, making the capital of the Car Spring Company, \$500,000. The \$400,000 was divided among the patents which the New England Car Company claimed to hold; among the rest was the Chaffee patent which was put in at \$20,000.
- Q. Nominally?
- A. Yes, sir.
- Q. That being the way it was stated, did Judson receive in any way one cent for it?
- A. No, sir.
- Q. In any way?
- A. Not in any way.
- Q. For all the stock that Judson received, did he give value?
- A. For his interest in the Metallic Rubber Company, which was one fifth, he received \$20,000 stock; all the rest he paid value.
- Q. Money?
- A. Money.
- Q. Did he give any other consideration than money?
- A. No sir, not that I am aware of.

Cross-examined by Mr. Richardson.

- Q. You say the property of the Car Spring Company, to make up this \$500,000, was made of what?
- A. The New England Car Company put in nothing but their patents.
- Q. What patents were they?
- A. Mr. Ray's patent.
- Q. What amount did they call that?
- A. I cannot remember at the moment, but the whole of the patents I know amounted to \$400,000.
- Q. That is all the Car Company had?
- A. All the Car Company put in.
- Q. What did the Metallic Rubber Company put in?
- A. They put in their real estate and machinery.
- Q. What did their real estate amount to?
- A. \$50,000.
- Q. The machinery.
- A. At \$50,000 also.
- Q. Any thing else?
- A. That was all.
- Q. Where did the Chaffee patent go in?
- A. It went in with the New England Car Co's, patent.
- Q. At \$20,000?
- A. Yes, sir.
- Q. That is the way their capital stock was made up?
- A. Yes, sir, that is the way it was made up.

Q. Judson received \$20,000 at the original par value?

A. At the original par value.

Q. What he has had since he has bought?

A. He has bought.

MR. CANDEE RECALLED AND EXAMINED BY MR. BRADY.

Q. You have heard read just now a letter addressed by you to Mr. Ford, in September 1850; have you the original?

A. I do not know that I have it.

Q. Where did you write it?

A. My impression is, that I wrote a letter to Mr. Ford in New Haven.

Q. What did you do with that?

A. I think it was handed to Chaffee.

Q. Had you had an interview with Chaffee before that about the payment of the \$1,500?

A. I had a consultation with somebody about it; I think it very probable that I might have had a conversation with him about it.

Q. How came you to give that letter to Chaffee?

A. For the purpose of getting \$375 from Mr. Ford for Chaffee's benefit—one quarter of the \$1,500 advance to go to Chaffee as I recollect.

Q. Who first applied to you to make that payment—that advance?

A. I have been trying to refresh my memory upon that subject, in regard to the first suggestion of that advance, and I cannot come to any thing very satisfactory in that respect, whether it was suggested by Chaffee, Judson, or Hutchinson, my impression about it is, that it was suggested in New York some few days after the contract of the 5th of September.

Q. This paper that has been given in evidence—the draft which you drew for that quarter of the \$1,500—is it all in your handwriting?

A. Yes, sir, that is my writing.

Q. What do the letters "O. E. O.," mean?

A. Chaffee extension contract.

Q. Do you know the writing of Hutchinson? (handing him a paper.)

A. I should say that is his writing.

Q. You heard of this extension being granted how soon after?

A. I should think Mr. Judson first informed me of it.

Q. What day?

A. About the 5th of September.

Q. At New Haven?

A. That is my impression.

Q. You went with Judson to Chaffee's house on the evening of that day?

A. Yes, sir.

Q. When on that day did you first see Judson?

A. In the course of the day, I cannot tell what part of the day I saw him; he called at my office in New Haven before I went to Chaffee's house.

Q. Did he confer with you about getting that agreement?

A. Yes, sir, he spoke to me upon the subject.

Q. Tell us what occurred?

A. He spoke upon the subject of having the renewal transferred to him, to stand in his name, to be holden for the benefit of Goodyear and others interested—the licensees. I asked him, why not take it in the name of Goodyear, agreeably to the contract which was existing between the two—between Chaffee and Goodyear of May. He replied, he thought it would be better for all parties to take it in the manner in which he proposed to take it; that he had had some conversation with some of the associates in New York upon the subject, and it was their view. He had with him, I believe, a draft of a conveyance which he proposed to have executed, or stated the substance of one to me, in which he was proposing to give Chaffee \$1,200 a year during the extension of the patent, and take a transfer in his name as he had suggested. In the evening we went.

Q. State whether you assented to it.

A. Yes, sir, I assented to it.

Q. In the evening you went to Chaffee's house; state now to the jury all

that occurred at Chaffee's house from the time you went there till you left, according to your best recollection just as the events happened there.

A. According to my best recollection, after we got into the house we found Woodman and Chaffee there, and Judson very soon opened the object of his call, which was to take a conveyance of the extension, proposing to give Chaffee \$1,200 a year during the life of it, to be paid quarterly. Chaffee seemed to think that he ought to have that pay increased to \$1,500, and upon that point there was some discussion between them, as to whether it should be \$1,200 or \$1,500 a year. After discussing it between themselves for some time, I suggested to Judson that I thought it was not best to stand for the difference—that he might as well allow Chaffee the \$1,500 a year, and on that suggestion he verbally agreed to it; and after that they drew up and executed the instruments and signed them, it being understood, instead of altering the instrument, as Judson had one with him, or a copy of one which he proposed to have filled up, that Chaffee should be allowed \$1,500 per annum, during the life of the extension. The sum of \$1,200 was not altered in the instrument, but that was verbally understood.

Q. What further occurred at that interview?

A. I cannot state any very particular occurrences that I recollect—nothing very impressive upon my memory in regard to what took place; we spent some of the time in a pleasant social way, and came away about 10 o'clock in the evening, I think.

Q. What part did Woodman take in that conversation?

A. I think he took the part of Chaffee there and advocated the allowance of \$1,500 a year.

Q. Was any thing said there about security by any body?

A. Not a word in my hearing; and I think if there had been I should have heard it.

Q. Was any thing said about the fee of this patent remaining in Chaffee, or any thing of that character or description?

A. I do not recollect any such thing.

Q. What objection if any, did Chaffee make to executing that contract?

A. I do not recollect that he made any objection to executing the contract, I cannot bring it within my recollection.

Q. Was any thing said by any body to the effect that Judson would see the licensees, and see that they took their licenses under that paper?

A. I do not remember any thing of that kind.

Q. What was said about the payment of that \$1,500, as to its being what they call a bonus or advance or payment, and who were to pay it, as you recollect, and believe it to have occurred?

A. I do not believe there was one word said about a bonus or about the advance of that \$1,500 that evening. The first of my hearing it was in Chaffee's affidavit at Hartford, in the fall of 1853.

Q. How soon after the execution of the agreement was the subject of making this advance of \$1,500 mentioned in your presence?

A. I should think that took place in New York a few days afterwards. My impression is that the associates were present—most of them at any rate.

Q. You drew a receipt the 17th of September, for \$1,125, which Chaffee signed and I read in evidence?

A. I drew the receipt.

Q. Had Judson any thing to do with that receipt or the drawing of it in any way whatever?

A. No, sir. I consider myself competent to draw a receipt.

Q. Was the language yours entirely or exclusively?

A. Yes, sir.

Q. You drew it according to your own idea?

A. Yes, sir.

Q. At Chaffee's house on the 5th of September, after the papers were signed did Goodyear come into Chaffee's house, or did you see Goodyear that night at all?

A. That is another point on which I have tried to refresh my recollection. I cannot recollect of Goodyear's being in the house while we were there; my impression is that he may have rode up as we came away from the house, but I cannot recollect of his being in the room while we were there.

Q. Did you see him that night at all?

A. I should say not.

Q. You was intimate with Goodyear at that time?

A. Yes, sir.

Q. How soon after the 5th of September did you see him?

A. I should think I seen him within a few days after that—possibly the next day.

Q. Did you have any conversation with him about this agreement of September 5th?

A. Yes, sir.

Q. What was it?

A. The first time I saw him after the conveyance was made, he called at my office in New Haven, and I stated the manner in which it was done and the objects for which it was done—that it was thought better to have it stand in the name of Judson, as trustee, and to have it in his name for certain purposes; and I stated, I think, in substance, that I did not think he ought to blame Chaffee for it. "Well," he said, "that is all well enough so far as the transfer is concerned, but it is no apology for Mr. Chaffee."

Q. What more did he say, if any thing?

A. I do not recollect what else was said particularly; that is about the substance.

Q. When did you first see Chaffee after the 5th of September?

A. I received a letter from him the next morning.

Q. When did you personally see Chaffee?

A. I cannot say as to that; I have seen him very frequently; I cannot say particularly whether I saw him a day or a week afterwards.

Q. When did you first in your life, from any source, learn that there was any pretence on the part of Chaffee that that paper executed that night was to be a security, or was obtained by any unfair means?

A. I cannot state the time, but it is since some of these prosecutions have been commenced by Mr. Day.

Q. Since Day took the transfer?

A. Since that, I think I must have got it from some deposition or some reports.

Q. Before that, had you ever heard or learned in any way from any source that there was any such pretence by anybody at any time?

A. Being made as security?

Q. Yes, or under unfair circumstances?

A. I never did. If I might be allowed to remark, I will state that if that had been the case, while I was in Chaffee's house that evening, I should have interposed and objected to an arrangement of that kind, and prevented it if I could.

Q. Mr. Chaffee says on the stand that Judson told him Goodyear was poor, and had exhausted his funds, and that he knew he was poor; what was the fact about his being poor at the time?

Objected to as incompetent.

Mr. BRADY said he wished to contradict Chaffee's testimony on the direct. After a little discussion the objection was withdrawn.

Q. What were the pecuniary circumstances of Goodyear at that time? What income was he receiving, of your knowledge?

A. I should think his income from the shoe tariffs (I must speak from the best impression I have; I have no data now to refer to,) was as much as eight or ten thousand dollars a year in 1850, and perhaps more.

Q. Where was he living?

A. In New Haven.

Q. What was he engaged in doing generally?

A. Experimenting, I believe, in his rubber.

Q. Was there any receipt taken twice for the same payment to Mr. Chaffee?

A. No, sir; if there were they were duplicates. I do not recollect of any duplicates; I do not think there were any.

Q. They have asked Chaffee about a negotiation between the shoe associates and him with a view to separate him from Bourn & Brown; were you the party who conducted that negotiation on the part of the shoe associates?

A. Yes, sir.

Q. When did it commence and when did it cease, if ever?

A. Mr. Hayward and myself were appointed a committee, and that appointment you will find upon the record book, that may give you the date.

Q. Is this it? (exhibiting a book).

A. Yes, sir.

Q. "July 9, 1852, Friday afternoon;" you and Hayward were appointed a committee for what purpose?

A. I think the resolution will put it in better language than I can.

Q. (Reads the resolution.) Is that the resolution under which you acted?

A. Yes, sir.

Q. When did that negotiation cease, if ever?

A. That negotiation ceased (I believe you have my letter on the record which states it) in September, 1852, I think it was.

Q. What was the reason it broke off?

Mr. JENOKES. It is in writing.

Mr. BRADY. I ask what reason, without reference to any writing—what the reason in fact was.

Mr. RICHARDSON objected to bringing out a reason—only the fact.

Q. Is that a letter you received in the course of the negotiation with Chaffee? (handing him a letter).

A. Yes, sir.

Mr. BRADY. There is a letter which has not been put in; the letter they refer to is of the 16th of February, 1853, from Candee to Chaffee—"Your favor of the 14th is received; I must refer you to Judson & Hayward, as I have had no part in your negotiation between you."

Witness. That is not the letter I referred to. It is a letter about the middle of September.

Mr. BRADY then put in a letter dated August 25, 1852, from Chaffee to Candee; and another, dated September 25, 1852, from Candee to Chaffee, withdrawing all propositions touching the matters relating to the conversation and proposals aforesaid.

Q. That is the letter you refer to?

A. That is the letter I refer to.

Q. In that letter you say "in consequence of what has occurred;" what had occurred?

Objected to as a side issue.

Mr. BRADY said if any use was to be made of that question of the negotiation being broken off, he wanted to vindicate his side.

The COURT. That is not to be made a question as I understand.

Q. Was there a payment to Chaffee of \$250—besides the receipts that have been given in evidence here?

A. Acting committee wise with Chaffee, we drew up on the 15th of July an agreement between ourselves, stipulating to increase Chaffee's pay somewhat—the quarterly payments; and on that instrument he drew on me \$250.

Q. What time was that?

A. The 1st or 2d of September, 1852; and I paid his draft of \$250.

Cross-examined by Mr. Richardson.

Q. Was not the \$250 drawn on account of this proposition that had been made in writing with Chaffee, in relation to the \$5,000, he expecting to carry it out?

- A. It was drawn on that agreement.
- Q. The agreement was not completed, was it?
- A. It was not signed; it was left open for consideration.
- Q. And then you wrote a note, withdrawing?
- A. Yes, sir.
- Q. After he drew the money?
- A. Yes, sir.
- Q. That was the purpose for which the money was drawn and the draft paid?
- A. The money was drawn under that agreement—the \$250.
- Q. And the draft paid on that account?
- A. Yes, sir.
- Q. Here is a book from which something has been read; what book is that?
- A. It is a book of records and minutes of the shoe associates.
- Q. Have they any other books?
- A. Yes, sir.
- Q. Got them here?
- A. Yes, sir; that is an account book.
- Q. In relation to the pecuniary circumstances of Goodyear, don't you know that he was very much involved in debt in 1850?
- A. I suppose he was owing—I don't know how largely.
- Mr. BRADY here produced the draft of the \$250—in order to fix the date, which was September 1, 1852.
- Q. Were there any judgments against him to your knowledge, uncollected and unpaid?
- A. I do not know that there was.
- Q. Don't you know there were various outstanding judgments against him in New York?
- A. No, sir.
- Q. How were his circumstances when he left this country? Wasn't he largely in debt?
- A. When he left for England I know he paid off considerable indebtedness at New Haven.
- Q. Did he pay all up?
- A. I cannot say whether he paid all up.
- Q. Wasn't he always, while in New Haven, very much involved?
- A. I do not think that he was very much involved while living in New Haven, he was receiving a great deal of money, and paying out a great deal. I do not know of any judgments against him; I didn't keep his books.
- Q. In 1850 hadn't he overdrawn, and was he not indebted to the associates?
- A. I do not think he was ever indebted to the associates as such.
- Q. He was in the receipt of eight or ten thousand dollars you say; do you mean that on his tariffs to the associates?
- A. I meant when I said that, that in 1850 I should place his receipts that year from eight to ten or twelve thousand dollars; it has been more since that.
- Q. Don't you know that he was arrested in Boston on executions, just before he left for England?
- A. I heard he was.
- Q. Don't you know that he was arrested in Boston in 1850 for debt, more than once during the year?
- A. I recollect of hearing that he was arrested in Boston.
- Q. Don't you know he drew drafts immediately after going to England, upon William Judson, which were protested?
- A. No, sir.
- Q. Did he draw any on you?
- A. Yes, sir.
- Q. Did you pay them?
- A. Yes, sir.
- Q. Didn't he draw some that you didn't pay?

A. No, sir.

Q. Were there not drafts there on Ford that were protested?

A. I cannot say; in regard to me, he drew on me once at six days, and I did not accept it; but when the draft matured I paid it; and so far as that is concerned I have been in advance to Goodyear myself.

Q. Don't you know that from the earliest time up to the time he left for England, Goodyear has been involved and been poor? No matter what his income has been, has not that been the fact?

A. I cannot state specifically about his obligations. I know he is a man that has been loose in his business, and it is said that he has been considerably in debt, owing a good deal of money; it may be said so now; but he has always been in the receipt of a good deal of money, and when he has it he always seems to be very much inclined to pay his debts.

Q. Did you ever know him to get enough to pay them on any occasion?

A. In answer to your inquiries I must state something from hearsay, or I cannot give an answer.

Mr. RICHARDSON. I suppose that he can only state as to his solvency and general reputation.

The Court suggested that he should hardly know which position the plaintiff had better take in regard to Mr. Goodyear's financial circumstances, and perhaps the counsel had better change points.

Q. You have said that you now take the place of Mr. Ackerman?

A. As trustee; yes, sir.

Q. Was there a vote passed by the associates at any time in reference to certain drafts to be drawn by Judson alone, instead of by him and Staples?

A. I am under the impression that that was done in a different way.

Q. Haven't you the vote on the book here?

A. I have examined the book to see, but I apprehend not. I think that was done in a different way; I think that authority is in manuscript and on file. Still, it may be in the book.

Q. Do you recollect making an affidavit about that in Connecticut?

A. I do not.

Q. You think it was not done by a vote?

A. I think not. I think that it is a paper on file.

Q. Have you got the paper?

A. I do not think I have.

Q. What year was it that the associates agreed that the drafts that had been drawn by Judson alone, should be treated in the accounting as if Staples had signed them too?

A. I cannot recollect what year it was.

Q. Look at that and see if it is a copy of the paper? (handing him a paper.)

A. I presume that is a correct copy.

Q. There was such an agreement as that, was there?

A. Yes, sir, I think there was.

Q. Did you exhibit in court in New Haven certain drafts drawn by Judson alone, on Mr. Ackerman?

A. I have no recollection of it.

Q. No recollection of there being any drafts exhibited there?

A. Not of Judson's; I have no recollection of any drafts except Chaffee's upon Judson.

Q. Don't you recollect that your counsel first put in that contract, and then you put in certain drafts drawn by Judson alone, in 1850?

A. I do not recollect it; if it is so, perhaps my affidavit at that time will show it.

Q. Have you got any drafts in your possession drawn by Judson?

A. No originals; I do not know that I have any drawn by him.

Q. Any drawn by him and Staples together?

A. I do not think I have; I am sure I have none drawn by him and Staples.

Mr. RICHARDSON here read the resolution of the associates allowing the drafts heretofore made by Judson, as good.

Q. Did all the papers of Mr. Ackerman come into your hands?

A. I suppose they did.

Q. You have looked amongst them for that purpose, I suppose?

A. No, sir.

Mr. BRADY then read the testimony of Mr. Jarvis, given in New York, from the original notes of the reporter.

Also such portions of the testimony of Mr. Hutchinson as were omitted in the first reading of the deposition.

MR. PARMELEE RECALLED, AND EXAMINED BY MR.
BRADLEY.

Mr. BRADLEY. I wish to ask Mr. Parmelee whether he has known, and if so, to what extent of the manufacture of vulcanized shoes in which camphene was used in preparing the rubber.

Mr. RICHARDSON objected to their opening of that question.

Mr. BRADLEY said the testimony they wished to put in now was to meet certain testimony that had been put in on the other side, which he objected to at the time, because they had no chance to rebut, in relation to the effect of camphene upon the vulcanizing process.

After some discussion the Court allowed the evidence to be taken.

Q. Please state what the effect of camphene is upon shoes manufactured by the vulcanizing process.

A. When I first went to work in Candee's establishment he was then manufacturing what was called camphene shoes, and vulcanizing them; they were all vulcanized. The first pair of rubber shoes that I ever had myself—that is, of manufactured rubber in this country—was made of that article and by that establishment. These I wore, and wore them out. I wore them one whole winter and part of the next winter. They were as good as any vulcanized shoes I have ever seen since.

Q. To what extent have they been successfully made?

A. I believe at the time I went there to work, they were manufacturing somewhere about three or four hundred pairs a day—possibly more; I should think not less than three and perhaps more than four hundred. The shoes were considered good at the time by those engaged in the business and were sold. I heard no complaint of them. The object of my going to work in that establishment was to start a new plan of operations, and put up new machinery, which he then had ready or nearly ready to run in his establishment; that is, a new process of manufacturing what they then termed steam rubber, or the Chaffee process without solvents.

Q. I merely want this one fact, to what extent camphene was successfully used there or anywhere else?

A. They manufactured in that way till the other machinery was started, and we first commenced manufacturing shoes by putting the soles on what was called the Chaffee process—

Q. I don't care any thing about the process—merely an answer to my single question.

A. They continued it till they worked it out.

Q. How long was that?

A. It was some months before we got the other established so as to take the place of camphene.

Q. Did you know of its being carried on elsewhere?

A. I have also used camphene in some part of the work up to the time—(Objected to).

Q. I want to know to what extent it was carried on elsewhere?

A. I do not know to how great an extent it was carried on in other places, because I was not there.

Q. Were rubber shoes made in other places in the same way?

A. I do not know myself; I was not at other establishments.

Q. Look at these shoes presented by the other side; are the bottoms of them perfectly sound? Then look at the tops and see what is the cause of their being in the condition they are.

A. (Examining them.) I should consider the soles much better than the uppers; I should think they were pretty sound; they seem to be pretty solid.

Q. What is the reason of the difference between the rubber on the top of that shoe and on the bottom?

A. I should think from the appearance of the shoe that the upper had been destroyed by oil-varnish being applied to it. I have seen that kind of work before.

Cross-examined by Mr. Richardson.

Q. Where did you ever know oil-varnish applied to rubber shoes—in what factory?

A. I have known it applied in Candee's establishment, in the New Brunswick Co.'s factory, and also in Ford & Co.'s.

Q. Did it spoil the shoes?

A. I have known it to spoil shoes in the New Brunswick establishment to some extent, and I have always known shoes spoiled by my own experiment in putting on oil-varnishes that were not properly prepared.

Q. Is not the bottom of that shoe rotten?

A. Well, that is not as tough as some rubber I have seen, and it is not as bad as some.

Q. Look at that pair (handing him a pair); was there ever any oil-varnish applied to that?

A. I should not think there was.

Q. Look at the bottom of these, and see if you can tell whether they were made at Candee's factory?

A. It is pretty hard telling.

Q. Examine them carefully, and say whether they were made there?

A. I think it is pretty hard telling; I see no stamp on it.

Q. Those never had any varnish?

A. I think quite likely they never had any oil-varnish.

Q. And they are pretty thoroughly decayed, bottom and top?

A. I should think they were.

Q. Is there more than one pair there?

A. I cannot tell, I have not had them separated, I should think there was likely three shoes.

Q. Do you see any thing now to determine where they were made?

A. I do not.

Q. Do you see that letter there?

A. I should think there was a couple of red marks; I do not know what they were intended to mean; I suppose, however, the size of the shoe.

Q. From the style of the shoes, about what time were they made?

A. (Pulling them apart.) I should think from the appearance they had been made some three years—as much as three years; that is, there is no rough on the bottom.

Q. Haven't you seen whole cases of Candee's shoes in that condition?

A. I have seen whole cases which were decomposed upon the binding; the binding was decomposed, and little strips up and down the heel.

Q. Haven't you seen them stick together so that they could not be pulled apart?

A. I would not say that; I do not know that I have, because the hands did pull many of them apart, and put them to their own use, at the time the shoes were destroyed. The only decomposition that appeared about them was the binding, and a little piece of the same material put on to the heel.

Q. The hands tore them apart?

A. They took them apart, and made use of a great many of them?

Q. When was the last time you were employed in Candee's factory?

A. I believe I left there in 1851.

Q. Were you there in 1850?

A. I think I was.

Q. In 1848 and '9?

A. I believe I was.

Q. During that time were there not large quantities of these shoes returned?

A. There was a large quantity returned which I made myself; I recollect very well of Mr. Candee's sending them up to the factory, and the teamster told them he sent them to me because I had made them.

Q. Don't you know that from 1844 to 1847 and '8, camphene shoes were very much in the habit of coming back on the hands of manufacturers?

A. I do not know that.

Q. Don't you know that there was more than one instance in which they were sent back to Mr. Candee?

A. Those shoes were not camphene that I spoke of.

Q. When were they made?

A. They were made after I went there, in 1846—after we got the works going.

Q. No camphene in those?

A. There was, for I never made any shoes without camphene till—

Q. Were there not strips put upon those that were prepared as camphene shoes?

A. There were not.

Q. Where was the camphene put about them?

A. It was put on one side of some cloth that the shoes were made of.

Q. Upon the linings?

A. No, sir, upon the piping—little strips of cloth that are put round the bottom and uppers, just underneath the uppers; that is what we call piping—and also upon the stiffening which we put upon the heels, and then also upon some part of the inner soling—the cloth inside.

Q. That was made of the camphene gum?

A. One side of it.

Q. Of the lining and stiffening?

A. No, sir, not the lining; the stiffening, a little piece that is put in to stiffen the heel; also a piece run round the shoe to give it strength; and then also the filling, as we call it, that goes in between the inner and outer sole.

Q. Were you ever in the trade of selling these camphene shoes?

A. I never sold any without it was to retail a few pairs at the factory.

Q. Never in the mercantile part of the business?

A. No, sir.

Direct resumed by Mr. Bradley.

Q. You say that lot of damaged goods was not made by the camphene process but by machinery?

A. Yes, sir.

Q. Was there difficulty in getting vulcanized shoes practically into operation?

A. (Objected to.)

Q. You say you used camphene on one side of the cloth for certain purposes; why did you do so?

A. Because we could not spread it thin enough with such machinery as we had.

Objected to as improper.

Q. Were the shoes you made with camphene on one side good shoes?

A. That kind of shoe has been sold by those manufacturing establishments which I have been associated with for a number of years, and successfully.

Q. Were they good shoes?

A. They were considered as good as any that have ever been made.

Q. On all occasions they were good.

A. If we made no other mistakes they were good.

Q. (By Mr. RICHARDSON.) Did you say that those shoes that came back were made with camphene on one side of the cloth?

A. I did, but it was another mistake that spoiled these shoes.

Q. What was it?

A. We disagreed about it. Mr. Lester and myself were the chief men in the manufacture of Candee's establishment. He said it was because I put a certain article into that which formed the binding, and also a little strip that was put in to cover the seam; and I laid it to his not heating the shoes sufficiently to stand the weather; and there not being a third party, I don't know that that question was ever decided.

Q. The heating is vulcanizing?

A. It is.

Q. That article that you put in was not camphene?

A. It was not; it is an article that has ever been used since by me throughout my work.

Q. (By Mr. RICHARDSON.) Was it a solvent?

A. With heat it is a solvent.

Q. (By Mr. BRADLEY.) What was the article?

A. Rosin.

MR. FORD RECALLED, AND EXAMINED BY MR. BRADLEY.

Q. Have you manufactured vulcanized shoes, in which camphene was used in preparing the rubber, to any extent, in your factory?

A. I cannot state of my own knowledge—I am not a practical man,—only my knowledge is sufficient for me to know that we made successfully camphene vulcanized shoes.

Q. How long did you make them successfully?

A. Till we introduced steam machinery.

Q. How long in point of time, and what amount per day, did you make?

A. This was in 1845 I became interested in the business; and some time in 1846 we introduced the other machinery.

Q. How many shoes did you make a day before you used the machinery?

A. I cannot answer that only by judgment; perhaps not over a hundred pairs a day. We manufactured shirred goods in part; we were not exclusively making shoes then.

Q. Were those good shoes, so far as camphene was concerned?

A. They certainly were.

Q. They were the vulcanized shoes in the market at that time?

A. Yes, sir.

Q. Have you been liable to have your shoes injured since you took the machinery in the place of camphene?

A. We always have some shoes at the end of every season come back as imperfect; they did then, they do now, and they do every year, and we make deductions for them.

Q. What is the reason of that?

A. I have always understood it to be the want of proper vulcanization.

Q. Do you know whether other rubber manufacturers of vulcanized shoes, during that year, were using camphene as well as yourself?

A. I was never in their factories; that is to say, so I think; I have been in the Newark rubber factory, and saw them use camphene, and I understood they used no other machinery, and saw no other.

Cross-examined, by Mr. Richardson.

Q. Didn't your shoes blister in 1845, '6 and '7?

A. Yes, sir, and they blistered since that.

Q. Didn't they blister from the camphene in them?

A. I never understood that that was the only cause.

Q. Did you ever see any vulcanized?

A. O yes; I often go to the factory and have a talk with the superintendent.

Q. The camphene shoes?

A. Yes, sir.

Q. You never understood that was the case?

A. I do not know that I understood that to be the case.

Q. Don't you know it was considered in your factory because of their blistering?

A. Not that alone.

Q. One of the causes?

A. You may say a part of the cause is this: In rolling the shoe, if you don't get the air all out the shoe will blister; if the workmen don't get out the air between the layers it will blister.

Q. Has that any thing to do with the camphene?

A. No, sir.

Q. Did you not understand in the trade that camphene-made shoes were likely to blister?

A. No, sir, I know we made very good shoes.

Q. You never had any such idea?

A. I never heard any such idea broached, that vulcanized goods were not good with camphene in them till I came here.

MR. ONDERDONK RE-CALLED AND EXAMINED BY MR. BRADLEY.

Q. You are a rubber manufacturer?

A. I have been.

Q. Have you ever in the business you have carried on, of making vulcanized rubber shoes, prepared the rubber with camphene, and if so, where?

A. We used to carry it on, when I was in business, with solvents—turpentine.

Q. To what extent, where, how and when?

A. We used to make about a hundred to two hundred and fifty pairs a day with turpentine; that was in 1845 and '6.

Q. What kind of shoes were they as to quality?

A. They were poor.

Q. What was the reason?

A. In 1845 and '46, from my recollection that flashed through my mind, we were engaged in the suspender business; it was later we made shoes; in 1845 and '46 we made suspender sheets. In 1847, I think, we discontinued it, then we commenced in shoes, principally, in fact, exclusively.

Q. I spoke about shoes; when did you commence that?

A. I think it was in 1847.

Q. Did you say you made some shoes that were bad during this year? What was the reason of it?

A. We had Chaffee at that time to oversee. In the first place we did not understand the manufacture and we could not make good shoes ourselves, and then we employed Chaffee. That was in 1847. He professed to know how to make perfect, good shoes; and those were the shoes that he made in 1847 and '8 concerning which Mr. Brower and Eddy testified.

Q. Were they camphene shoes or not?

A. The first part of them were camphene shoes; in fact there was camphene in the piping all the way through on one side.

Q. How was it with the rubber on the body of the shoe?

A. Well, I cannot say whether there was camphene in them, or not; there was to some extent. Chaffee came there and had the exclusive management, and managed it in his own way, as he had agreed to do; and I think the latter part of the time, I am satisfied, there was no camphene in except in the piping on one side.

Q. What kind of shoes were they?

A. Those were the shoes Mr. Brower testified to—poor.

Mr. BRADLEY. I wish to show that shoes made without camphene were bad.

The COURT. You are to show that you made good shoes by the camphene vulcanizing process.

Mr. BRADLEY. I think this witness could state that.

A. Good shoes could be made with camphene. I never practically did much at that. We used to make thousands of yards of metallic sheets for suspenders out of camphene, as good gum as was ever made, and we used to think, better than any.

Q. And that was vulcanized?

A. Yes, sir, thousands of yards of it for suspenders.

Cross-examined by Mr. Richardson.

Q. After Chaffee came there you began to dispense with camphene?

A. We had machinery before he came—machinery he claimed as his. After he came there we had been making suspenders. The shoe trade was a new trade, and we found that Bourn made better shoes than we did, and we wanted our goods to have a good reputation in the market, and so we employed Chaffee for that very purpose.

Q. You say those shoes which Brower spoke of as being bad, were made without camphene?

A. They were, towards the last.

Q. Those that Brower spoke of?

A. Yes; that is, I think we did not establish an agency in New York at first—not in 1847; I think not before 1848.

Q. Didn't you make camphene shoes in 1848?

A. We might have made some; we never dispensed with it on the linings.

Q. Cannot every body in the trade tell the camphene shoes at once, on inspection?

A. I do not know that they can.

Q. Do you know whether they can or not?

A. I am doubtful: it depends a great deal upon the vulcanization. Camphene goods can be so vulcanized that you cannot trace the camphene in it; or it may be vulcanized so that you can; if it is thoroughly vulcanized, after a little time I should think it would be very difficult to detect it.

Adjourned.

TWENTY-FIFTH DAY.

TESTIMONY OF WOODMAN.

PROVIDENCE, *Thursday, Feb. 22, 1855.*

Mr. BRADY read the depositions of John C. Wheeler and James A. Dorr.

Mr. BRADY then offered the papers connected with the chain of title, by which the New England Car Spring Company was merged into, or had brought down to it, the New England Car Spring Company and the Metallic Rubber Company, in order to fix the dates, and to show that the companies were working under the Goodyear right.

Mr. RICHARDSON said it was of no ~~sort~~ of importance, as the licenses did not include the Chaffee patent.

The COURT allowed the dates to be stated, and said that the fact of their working under the Goodyear right must be proved *in pais*.

The defendants here rested.

Mr. RICHARDSON offered to put in a piece of cloth spread on both sides with the rubber on the slow roller, witnessed by Mr. Durant and half a dozen different gentlemen.

Mr. BRADLEY said they did not care to have any more experiments performed behind their backs. They would allow Chaffee to exhibit that process to the jury or counsel, but would not take any body's testimony about its having been done.

Mr. RICHARDSON replied that the machinery was not adjusted at Chaffee's factory for such an experiment; it required some time and trouble to adjust it, as it was not their ordinary business to do such work. He would offer the testimony of five or six respectable witnesses to the fact that it had been done.

Mr. BRADLEY declined the offer.

MR. WOODMAN RE-CALLED, AND EXAMINED BY
MR. RICHARDSON.

Q. When you saw Mr. Judson in New York, prior to your going to New Haven, did he say any thing about paying Chaffee the \$1,500 as a bonus?

A. I should say he did.

Q. What did he say?

A. He sent me from there to New Haven with an errand.

Q. What did he say on this one subject of this money? Come right to the point.

A. I do not exactly understand the question.

Q. What did he say on the subject of the \$1,500, if any thing?

A. He told me to ask Chaffee if such a sum, in addition to some other sum, would be satisfactory; and, he would give that sum, if he would convey.

Q. What sum was that?

A. I understood it to be \$1,500; I never heard of any other sum.

Q. What sum yearly?

A. When we were in New York it was \$1,200 per annum; that was the sum, I think, was agreed upon.

Q. Will you state what Judson said to you, as near as you can?

A. As near as I can recollect, he stated that he thought he would be willing to give him \$1,500 down and \$1,200 a year for seven years, or during the time of the extension of the patent right. I think that is as near—I don't think it was the same language, but it is the substance of it.

Q. Can you be mistaken in relation to the \$1,500 down? How much was said about that between you and Judson?

Mr. BRADY. You cannot ask him whether he can be mistaken.

Q. Was there any more said than you have stated?

A. Nothing varying from that; that, I think, was the substance of our conversation, condensed; I never heard of any other sum.

Q. (By Mr. BRADY.) Was any thing of that kind said at New Haven?

A. There was between me and Chaffee.

Q. Between Chaffee and Judson?

A. The last of our agreement in Chaffee's house was, distinctly and unequivocally, that Chaffee was to have for his immediate use \$1,500 paid down, and \$1,500 for the succeeding seven years; and it was without equivocation. It is as bright in my mind as if it were last night; I never heard and never dreamed of any other thing.

Mr. RICHARDSON then offered to put in evidence the letters of Seth P. Staples, in reference to the payment of \$750, to show the whole correspondence.

(Objected to, as not evidence.)

The COURT, after examining the letters, ruled them out, as not connected with the transaction.

Mr. RICHARDSON then put in the certificate of a record of a judgment against Charles Goodyear, rendered in October, 1850, and now remaining unpaid amounting to \$306 23.

The plaintiff here rested; when

Mr. BRADY offered to put in the decree of a judgment against Horace H. Day, and an injunction against him for infringing the vulcanizing patent; which was not allowed.

The COUNSEL for the plaintiff then proceeded to put in their authorities; after which

Mr. BRADLEY proceeded to sum up on the part of the defence, confining himself to the question of the validity of the patent. His argument occupied,

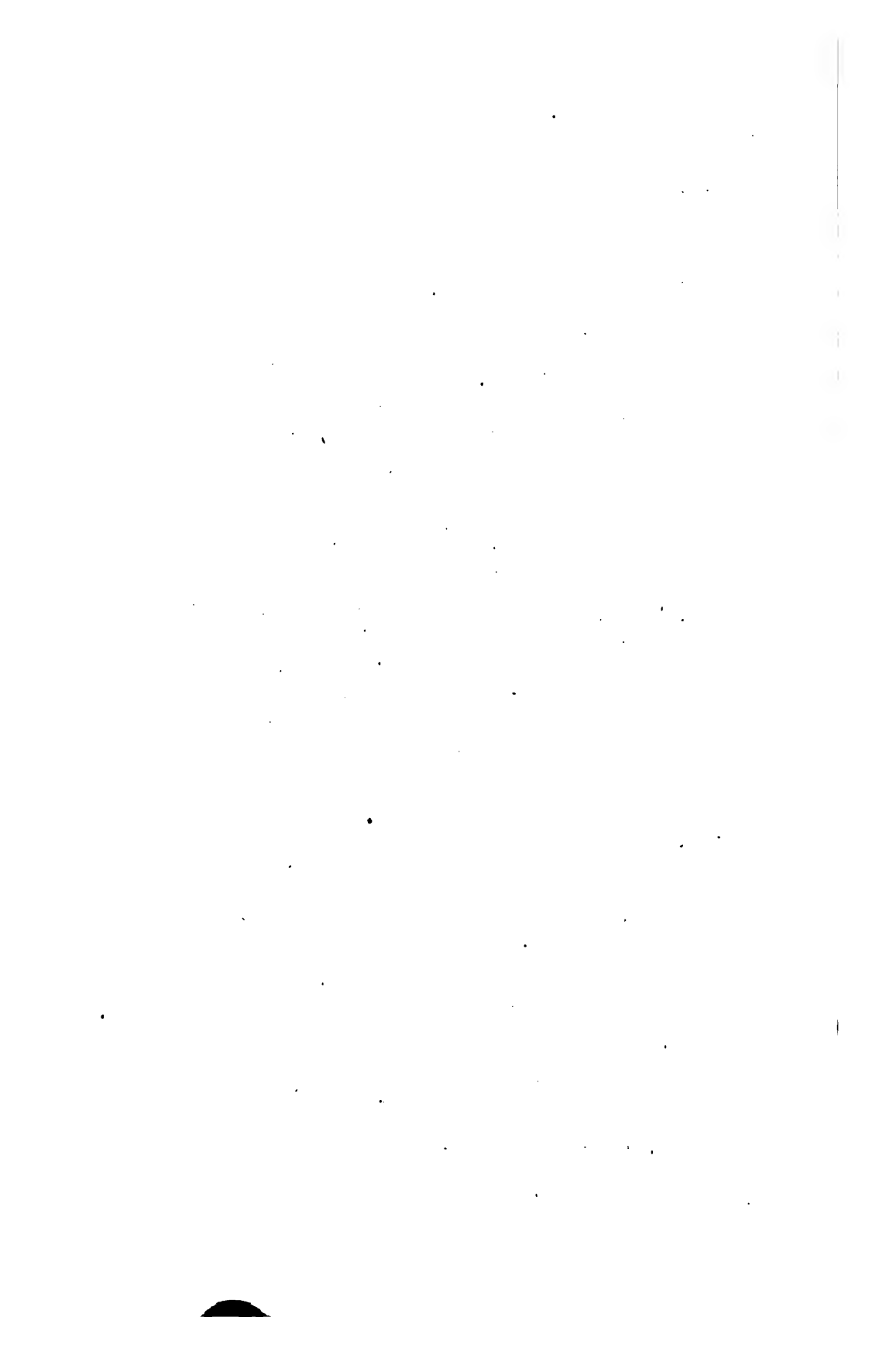
twelve hours, commencing on Thursday, February 22, and ending on Monday, February 26.

Mr. JENCKES followed in an argument of five hours.

Mr. BRADY then summed up on the question of title, occupying eleven hours.

Mr. RICHARDSON followed, occupying eleven hours; when, after the charge of the Court, the case went to the jury.





U. S. CIRCUIT COURT.

RHODE ISLAND DISTRICT.

HORACE H. DAY,

vs.

ISAAC HARTSHORN, *et al.*

At Law.

Interrogatories to be propounded in the above entitled cause, on the part of the defendant, to Hiram Hutchinson, now in Paris, in the Empire of France.

DEPOSITION OF HIRAM HUTCHINSON.

1. What is your present residence and occupation?
2. Have you any interest or connection with the manufacture of India rubber, or any patent affecting the same in the United States at the present time, or in this suit?
3. Have you ever, if yes, when and where been connected with the manufacture of India rubber in the United States?
4. What was your interest, if any, in said business, during said time?
5. Were there any processes used in said manufacture which were, or claimed to be covered by any patents, or authorized by any licenses. If yes, what patents and what licenses?
6. Were there any legal documents or legal proceedings affecting said patents, or licenses, or processes. If yes, what charge or connection, if any, did you have with such proceedings or documents?
7. What interest, if any, to your knowledge, did William Judson have in said patents or licenses, or the proceeds thereof, and what relation or connection did he sustain to the parties owning or interested in the same, and during what period has such interest or relation existed?
8. What connection, if any, did said Judson have with procuring the extension of the patent issued to Edwin M. Chaffee, dated August 31, 1836?
9. In whose behalf and for whose interest did said Judson act in procuring said extension?

10. In what capacity did he act? whose money, if any, did he expend? by whose suggestion, and at whose request did he act?

11. Were said Chaffee and yourself examined as witnesses in the matter of said extension, in the city of New York or elsewhere, prior to said extension, if yea, at about what time?

12. Did you have any conversations with said Chaffee at that time respecting said extension?

13. Did you hear him converse with said Judson, or with any other person, respecting said extension about that time?

14. What did said Chaffee say to you respecting the same, or the persons or interests in whose behalf said application was made?

15. What did said Chaffee say to said Judson, or to any other person in your presence and hearing, respecting said extension, or the persons or interest in whose behalf said application was made?

16. After said extension was procured, did you converse with any one, or were you present at any conversations respecting the title to said extension, or the person in whom it should be vested?

17. For whose benefit, if for any person's, was it to be thus held, and what benefit or advantage was said Chaffee to derive from said extension, and how was the same to be secured to him?

18. Was any agreement executed between said Chaffee and said Judson to your knowledge, respecting said extension—if yea, when?

19. Did said Chaffee ever say any thing to you respecting the agreement of September 5, 1850, between himself and said Judson; if yea, what was said?

20. Did he ever, after that time, say any thing about his interest in said extension, or that of Charles Goodyear and his licensees—if yea, what?

21. Did he ever say any thing about the relation of said Judson and said Goodyear to himself—if yea, what?

22. Why was the application for said extended patent made?

23. When, if ever, did you first hear of the agreement between said Judson and said Chaffee, under date of November 12th, 1851?

24. Who was the owner of the patent issued to Edwin M. Chaffee, dated August 31st, 1836, for an improvement in the application of undissolved caoutchouc to clothes, leather, &c., and in the machinery used in the process at and prior to the extension of the same, on the 31st of August, 1850, and how, and for what consideration did such owner obtain such patent, and at what time did he become the owner of the same?

25. At the time said Charles Goodyear became the owner of the said patent, if you state that he became the owner of the same, to what extent, if at all, were the processes and machinery claimed to be covered by said patent in use, if at all, from said time to the 31st of August, 1850; state specifically the names of all the parties so using the same?

26. Were the processes and machinery described in the Chaffee patent, ever used in connection, in the vulcanizing process, patented by the patent issued to Charles Goodyear, June 15th, 1844, and re-issued December 25th, 1849, for a new and useful improvement in the processes for the manufacture of India rubber?

27. What measures, if any, were taken by you, or by Charles Goodyear, to introduce the use of said processes and machinery in connection with said vulcanizing process?

28. What experiments, if any, and at what expense, were tried, under.

the direction of said Goodyear, for operating said processes and machinery in connection with said vulcanizing process?

29. What length of time elapsed between the commencement of said experiments and the first use of the said processes and machinery in the manufacture of India rubber in connection with said vulcanizing process?

30. Where were said processes and machinery first used in connection with said vulcanizing process, and by whom?

31. Were the persons so using the same, manufacturers of India rubber; if so, of what kind, under what patent, and by whose license?

32. What difficulties, if any, were there in inducing said parties to use said processes and machinery, and by what efforts, if any, were those difficulties overcome?

33. What was the process adopted by the manufacturers of vulcanized India rubber as licensees from Charles Goodyear or otherwise, previous to the use by them of the process and machinery claimed to be covered by the Chaffee Patent?

34. What difficulties if any existed in inducing them to make the change, and when did they adopt said processes and machinery claimed to be covered by the Chaffee patent, and by whom were they finally used?

35. Among the parties who used the said process and machinery, who, if any, were licensees of said vulcanizing process, and who not licensees of said vulcanizing process prior to the extension of the Chaffee Patent?

36. By what right or permission, if any, did said licensees of said vulcanizing process use said processes and machinery, and how was said right or permission given or expressed, in writing? if so, in what writing, or orally or otherwise?

37. Upon what terms or conditions, or for what compensation, if any, in addition to the compensation paid for said license to use said vulcanizing process, if any thing, were the licensees of Charles Goodyear allowed to use the same processes and machinery?

38. Was said use of said Chaffee processes and machinery by said licensees without making any compensation therefor; if so, did they so use them for said Goodyear's interest or otherwise?

39. For what purpose was the Chaffee Patent purchased by Charles Goodyear?

40. Were said processes and machinery freely used by all persons employed in India rubber manufacture previous to the extension thereof, or was said use controlled or attempted to be controlled by said Goodyear or others by agreements, trials, or suits?

41. Was any person ever sued for the use of the said processes and machinery by Charles Goodyear, if so, whom?

42. Did Horace H. Day ever use said processes and machinery in the manufacture of the articles which he was authorized to make or for the purpose for which he was licensed?

43. Did said Day ever use said processes and machinery for the purpose for which he was not licensed, or in the manufacture of articles which he was not authorized to make?

44. Under what agreement, if any, and at whose suggestion and for what purposes was the application for the extension of the said Chaffee Patent made?

45. Was Edwin M. Chaffee ever in your employment, if so, when, for how long a time, and at what salary?

46. What service, if any, did said Chaffee render in said employment, and were you not anxious to discharge him from said employment, and what obstacles, if any, were there to such discharge?

47. Was William Judson during the pendency of the application for the extension of said patent the Attorney and Counsel of the India Rubber Company of which you were a member and president—if yea, how long had he been so and when did he cease to be such?

48. Do you know or have you heard of any other matter or thing to the benefit or advantage of the defendants, which you have not stated in answer to the preceding interrogatories, if so, state the same, particularizing what you know and what you have been informed, and as to information state when, where, and from whom or what source it was obtained.

AMES, BRADLEY, & PITMAN,
for Defts.

CIRCUIT COURT OF THE UNITED STATES.

RHODE ISLAND DISTRICT, ss.

HORACE H. DAY.

vs.

At Law,

ISAAC HARTSHORN, *et al.*

Objections of Plaintiff to the Interrogatories propounded by the Defendants in the above entitled cause to Hiram Hutchinson now supposed to be in Paris, in the empire of France—

And the plaintiff here objects to the 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32d, 33d, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42d, 43d, 44th, 45th, 46th, 47th, and 48th, interrogatories in chief and the answers thereto—because they are immaterial to the matters in issue; because they ask the opinion of the witness both upon matters of fact and matters of law, and because they ask matters of mixed law and fact; and because they ask the witness to state what he has heard from others and the answers thereto would be hearsay, and what is shown to be in writing; and because they are leading—and the entire set of interrogatories seek to obtain such opinions, inferences, and hearsays of the witness without putting him questions which would call out the actual facts, if he knew any, as should exclude the whole. Therefore the plaintiff declines putting any cross-interrogatories, but answers his objections to the Commission should one issue.

Submitted by

T. A. JENCKES,

Atty. for Plff.

Hiram Hutchinson of New York, aged fifty years and upwards, being duly and publicly sworn pursuant to the directions hereto annexed and examined on the part of the Defendants, doth depose and say as follows, viz:

To the first interrogatory he saith:

At Montargis, Department of Soiret, France, and engaged in the manufacture of India rubber goods.

To the second interrogatory he saith:

None whatever.

To the third interrogatory he saith:

I have been engaged in the manufacture of India rubber constantly since 1835, from that time to 1843, in New Brunswick, New Jersey. From 1843 to 1848, in Newark, New Jersey; and largely engaged since 1845. I was President of the Newark India Rubber Manufacturing Company from its incorporation in 1846 till 1852, and had the principal management and control of all its affairs connected with patent rights or licenses under patents, and of all suits growing out of, or relating to patent rights licensees.

To the fourth interrogatory he saith:

I was a large stockholder in that company at all times during my connection with it:

To the fifth interrogatory he saith:

The company from the time of its formation in 1846, and various persons and companies who were licensees of Goodyear, previous to 1850, used the process and invention of Charles Goodyear, patented in 1844, and reissued in 1849, as licensees of Goodyear and the Newark Company, and other persons and companies who were licensees of Goodyear for several years previous to 1850, used by permission of Goodyear, the patented process and machinery of Edwin Chaffee, granted on the 31st of August, 1836, and extended on the 31st of August 1850, and have ever since used the same.

To the sixth interrogatory he saith:

I was consulted by Mr. Judson and conferred with him in almost all matters connected with Goodyear's patent rubber interest, and knew of the general policy followed by Mr. Judson in regard to all those patent matters.

To the seventh interrogatory he saith:

William Judson has been the owner of one eighth interest in Charles Goodyear's India Rubber Patent, since 1848, and ever since that time has been the attorney and counsellor of Goodyear, for prosecuting all suits relating to his patents, for infringements, and in granting licenses under said patents and in taking out patents, and generally in relation to all his India rubber interests. In July, 1848, Goodyear by an agreement between the shoe associates, afterwards so called, and himself, appropriated fifteen per cent of all his tariff payable by his licensees under his vulcanized rubber patent, to defray the expenses of prosecuting infringements on such patents in which he and they were interested, and for amending or renewing the same; and William Judson in connection with S. P. Staples, was made trustee of the fund created by such appropriation. And the payment of such fifteen per cent. was thereafter made to Mr. Judson; Mr. Judson had also since July, 1848, been in the receipt of an appropriation of fifteen per cent, on three cents per pair on all shoes made by the shoe associates under five hundred pairs per day; and five cents per pair on all shoes made over five hundred pairs per day, under Goodyear's patents and their licensees under them; which appropriation was made and fund created under an agreement between the shoe associates and Mr. Goodyear, made at the same time that Goodyear's fifteen per cent appropriation of his own tariff was made, and in consideration of it, and for the same purposes and objects. And I took a part and probably the principal part, with Leverett Candee, another of the shoe associates, in the conduct and management of the negotiation with Mr. Goodyear and Judson, which resulted in the agreement.

To the eighth interrogatory he saith:

Mr. Judson at the time that the extension was applied for, was the attorney and Counsellor of Goodyear, and of the shoe associates, in all the patent rubber interests of Goodyear, in which they and he had a common interest, and had been such for many years previous, and he acted as such in procuring the ex-

tension, and for their benefit and for the benefit of the licensees of Goodyear, and his own; and Mr. Judson consulted with me in regard to the extension and the proceedings therein as one of the said associates and licensees of Goodyear, and the proceedings to obtain the same were had by my consent and approval.

To the ninth interrogatory he saith:

Mr. Judson acted in procuring said extension in behalf of Goodyear and his licensees, and for their benefit as well as his own as interested in said patents.

To the tenth interrogatory he saith:

Mr. Judson acted in procuring said extension of the Chaffee Patent in capacity of attorney and counsellor and trustee of Charles Goodyear and the shoe associates, and in appropriating their funds in his hands for this purpose; and in accordance with the objects of their application and his obligation as such trustees I was consulted by Mr. Judson in regard to the policy of attempting to procure the extension, and knew the objects and motives for doing it; and the application for such extension was made and the proceedings carried on to obtain the same by my approval and co-operation.

To the eleventh interrogatory he saith:

I was examined as a witness in the extension proceeding about two weeks previous to the extension being granted. Edwin M. Chaffee was examined shortly previous but I was not present at his examination.

To the twelfth interrogatory he saith:

I had several conversations with Chaffee at various times about the extension proceedings. I saw him at Mr. Staple's office, and at Mr. Judson's office, 98 Broadway.

To the thirteenth interrogatory he saith:

I have met Mr. Chaffee at different times at Mr. Judson's office when the subject had been talked over, but I do not recollect any particular conversation at which Mr. Judson was present.

To the fourteenth interrogatory he saith:

Mr. Chaffee always spoke of the matter of extension as being for the benefit of Goodyear and his licensees, that he had an agreement with Goodyear, without specifying the particulars of that agreement, and always referred to Mr. Judson as acting for their benefit.

To the fifteenth interrogatory he saith:

I cannot distinctly call to mind any conversation with Chaffee at which Mr. Judson was present, in regard to the extension.

To the sixteenth interrogatory he saith:

Two or three days after the extension was obtained and immediately after the return of Mr. Judson from Washington, he sent for me to consult about the disposition he proposed to have made, of the title to the extension, and advised that the title should be vested in himself in trust for the benefit of Goodyear and his licensees, instead of having it conveyed directly to Goodyear, and stated that he had proposed this to Chaffee but that he had objected on account of his obligations to convey the extension directly to Goodyear. Mr. Judson proposed to pay Chaffee twelve hundred dollars per year until the patent was set aside and advised making the payment in that way, for the purpose of making Chaffee interested in sustaining the patent, in case he should ever be driven to the necessity of prosecuting on it, by any failure to sustain Goodyear's patent. John R. Ford, one of the shoe associates was present at this interview and consultation, and we both approved of the proposition of Mr. Judson, and authorized him to make the agreement with Chaffee and pay him twelve thousand dollars per annum, and take the conveyance of the title of the extension to himself as trustee for the benefit of Goodyear and his licensees as being the most

judicious course for all parties interested. I met Mr. Chaffee the same day at the office of Mr. Judson and had a conversation with him on the same subject of conveying the title to Mr. Judson in trust, and the only objection he expressed, was, his fear of offending Mr. Goodyear which might be the cause of his losing his situation, but, upon the promise of about the same amount in money annually (and having his time for other purposes) as he was getting for his services from Goodyear he agreed to do it providing the payment of one year's annuity should be paid in advance, and so continued that at the end of six years the whole payments should be completed.

To the seventeenth interrogatory he saith:

The title of the extension was to be held by Mr. Judson as trustee for the benefit of Goodyear and his licensees, and Chaffee was to be paid out of the sum out of the fund of which Mr. Judson was trustee, and was to have the right to use the patent or machinery in his business.

To the eighteenth interrogatory he saith:

The agreement which Mr. Judson was authorized to make shortly afterwards was made, by which the benefit of the extension was secured to Goodyear, and his licensees by a conveyance to Mr. Judson in trust. I saw the agreement soon after its execution.

To the nineteenth interrogatory he saith:

The matter of the extension was sometimes spoken of by Mr. Chaffee without undertaking to recollect the precise language used by Mr. Chaffee. I always inferred that he was satisfied with the agreement and considered that we acted liberally by him.

To the twentieth interrogatory he saith:

I had a conversation with Mr. Chaffee in Broadway, New York, after I had parted with all my India rubber interests in the United States, and a short time before I sailed for France, which was on the 12th of February 1853; in this conversation Chaffee mentioned to me his difficulties with Mr. Judson and complained that he did not pay him his annuity and asked me what I would advise him to do. I told him that his difficulties arose entirely from his connection with Bourne & Brown, who were infringing on Goodyear's patents by manufacturing shoes, and that was the reason his annuity was not paid. I told him that they had refrained from prosecuting Bourne & Brown on account of their friendly feelings toward him, that I had no interest in the matter then, but I knew the feelings of the shoe associates toward him and their willingness to make a liberal arrangement with him, and I advised him to make the best arrangement he could, with the parties and leave Bourne & Brown.

To the twenty-first interrogatory he saith:

Nothing occurs to me at this time, more than I have said.

To the twenty-second interrogatory he saith:

Our object was to prevent the title to any extension going into the hands of infringers on Goodyear's patent. Mr. Chaffee told me that Horace H. Day had made propositions to him to procure the extension, who was then the principal infringer on Goodyear's patents, and it was thought if it could be extended it might afford some protection against infringers, as the last resort in case Goodyear's patent should fail.

To the twenty-third interrogatory he saith:

I never heard of it until after my arrival in France.

To the twenty-fourth interrogatory he saith:

Goodyear claimed to be owner I think as early as 1845. I do not know what he paid for it at the time he became the owner.

To the twenty-fifth interrogatory he saith:

At the time Goodyear first claimed to be the owner of the Chaffee Patent no one to my knowledge was using it; it is now used by all Goodyear's licensees of whom I have any knowledge, and was so at the time of the extension. The names of Goodyear's licensees, such as I can now recollect are: The Newark India Rubber Manufacturing Company; L. Candee & Company; Ford & Company; The Hayward Rubber Company; New Brunswick Rubber Company; Hartshorn & Company; Goodyear's Shoe Company; The Union India Rubber Company; The New York Rubber Company; The Malden Manufacturing Company; Naugatuck Manufacturing Company; Boston Belting Company; John Greacen; New England Car Spring Manufacturing Company, and Horace H. Day.

To the twenty-sixth interrogatory he saith:

The process and machinery described in the Chaffee Patent has been used in connection with Goodyear's vulcanizing process—by his licensees very generally since 1847, and was used by all of them I believe previous to its extension.

To the twenty-seventh interrogatory he saith:

After the time Goodyear became the owner of the Chaffee Patent he attempted to persuade me to adopt that process in manufacturing vulcanized rubber which I for a long time declined to do, as did most of his licensees, as I was informed at that time, and I believe Goodyear was very anxious to introduce its use among all his licensees. When I was in connection with Mr. Remon in 1845, and was building the factory now owned and occupied by the Newark India Rubber Manufacturing Company for Manufacturing India rubber Goods. Mr. Goodyear was very desirous that we should introduce the Chaffee machinery, which we then declined, preferring the old process.

To the twenty-eighth interrogatory he saith:

I have the knowledge of the matter inquired of.

To the twenty-ninth interrogatory he saith:

I am not able to say.

To the thirtieth interrogatory he saith:

I believe the Naugatuck India Rubber Company first used it.

To the thirty-first interrogatory he saith:

They were manufacturers of India rubber and licensees under Goodyear's Patent for Vulcanizing India rubber.

To the thirty-second interrogatory he saith:

There were doubts about the success of the process in connection with the vulcanizing process, and a reluctance to incur the expense of a change; and it was finally adopted by us, at the earnest solicitation of Goodyear and his assurances of its practicability and value.

To the thirty-third interrogatory he saith:

Spirits of turpentine was used to dissolve the rubber before grinding.

To the thirty-fourth interrogatory he saith:

There was a general reluctance, I believe, to adopting it, but it was finally adopted by all.

To the thirty-fifth interrogatory he saith:

In my answer to interrogatory twenty-five, I have named parties who were licensees of Goodyear at one time. And among those who were not licensees, previous to the extension, were Dr. Isaac Hartshorn, Jacob S. Jackson, and probably others that I do not remember.

To the thirty-sixth interrogatory he saith :

All the licensees of Goodyear had permission to use the Chaffee machinery for the purposes for which they had licenses, there was no written license to use it in any case within my knowledge or any reference made to it in any of his licenses.

To the thirty-seventh interrogatory he saith :

The licensees of Goodyear were allowed to use Chaffee's process and machinery, without any compensation, in addition to the compensation paid for their license to use his vulcanizing process.

To the thirty-eighth interrogatory he saith :

Mr. Goodyear considered for his interest that his licensees should use Chaffee's process and machinery without making any compensation therefor, and it was so used.

To the thirty-ninth interrogatory he saith :

The Chaffee patent I have no doubt was purchased by Charles Goodyear for the purpose of being used in connection with his vulcanized rubber patent, as that was the only use that was made of it to my knowledge.

To the fortieth interrogatory he saith :

The Chaffee process and machinery was freely used by all persons engaged in the manufacture of India rubber, previous to its extension, without interference on the part of Goodyear or any other person, and without any attempt to control its use by the said Goodyear or other persons, by agreements, suits or threats, or any other means, except as against Horace H. Day, so far as I know.

To the forty-first interrogatory he saith :

No person or company has ever sued, to my knowledge, for the use of said Chaffee patent or process and machinery, by said Goodyear, except Horace H. Day.

To the forty-second interrogatory he saith :

I never visited Day's factory after such machinery was adopted generally by manufacturers of India rubber, but I know that he purchased such machinery, and have no doubt he employed it in his manufacture.

To the forty-third interrogatory he saith :

I have no personal knowledge of his using it, but have no doubt that he did.

To the forty-fourth interrogatory he saith :

The application was made for the extension of Chaffee's patent in consideration of an agreement made between Chaffee and Goodyear for such extension, under the direction and management of Mr. Judson. By the desire of the shoe associates, and for the benefit of Goodyear and his licensees, I had a full knowledge of the object and motive from frequent consultations and discussions with the different members of the shoe associates, and with Mr. Judson, and assisted in procuring the extension, and know that the course pursued met the approval of all the parties interested in Goodyear's patent, and who contributed towards the fund of which Mr. Judson was trustee.

To the forty-fifth interrogatory he saith :

Edwin M. Chaffee was in the employment of our company, I think, at twelve hundred dollars a year, for three days.

To the forty-sixth interrogatory he saith :

Chaffee left without assigning any reason and never returned. He had been paid for the time he served when he left.

To the forty-seventh interrogatory he saith :

Mr. Judson acted as counsellor for our company, in connection with the shoe associates, for the purpose of sustaining the patents of Goodyear, in which he and they were interested, but never acted as attorney or counsellor for them in any other matter.

To the forty-eighth interrogatory he saith :

Nothing occurs to me without specific questions being put.

H. HUTCHINSON.

Examination taken, reduced to writing, and by the witness subscribed to this 9th day of September, A. D., 1854.

D. K. McRAE, U. S. Consul,
Commissioner.

Deposition of witnesses produced sworn and examined the ninth day of September, in the year one thousand eight hundred and fifty-four, at the United States Consulate, Paris, France, under and by virtue of a commission issued out of the Circuit Court of the United States, within and for the Rhode Island District, in a certain cause therein depending, between Horace H. Day, plaintiff, and Isaac Hartshorn and others, defendants.

D. K. McRAE, U. S. Consul,
Commissioner.

UNITED STATES OF AMERICA.

RHODE ISLAND DISTRICT, SO.

{ CLERK'S OFFICE CIRCUIT COURT,
} At Providence, April 6th, 1855.

I Henry Pitman, Clerk of said Court for said District, do hereby certify that the above and foregoing Twenty pages contain a true copy of the original now on file in this office, duly examined and compared.

[L. s.]

IN TESTIMONY whereof I have hereunto set the seal of said court and my hand on the day and year last above written.

HENRY PITMAN,
Clerk.

Direct Interrogatories to be propounded to JOHN C. WHEELER, JAMES A. DORR, CHARLES M. KELLER, JOHN GREACEN, HOBERT SMALES, GEORGE G. S. THOMPSON, NATHANIEL JARVIS, Jr., HENRY E. CLARK, WILLIAM P. BUCKMASTER, SAMUEL MARSH, WILLIAM ATKINSON and JAMES McCALLY, under a commission to take testimony to be used in the trial of an action at law, now pending in the U. S. Circuit Court, for R. I. District, wherein H. H. DAY is Plaintiff, and ISAAC HARTSHORN, *et als*, are Defendants.

S. AMES,
C. S. BRADLEY, and
J. S. PITMAN,
of Counsel for Defendants.

Direct Interrogatories to be propounded to JOHN C. WHEELER, of Union Place Hotel, New York City.

1. What is your occupation—what was it in the year 1849, 1850 and 1851?
2. Do you know Charles Goodyear and Edwin M. Chaffee or either of them—if yea, when did you first know them, or either of them?
3. Did Charles Goodyear ever stop at your hotel—if yea, in what years? Please state the time when he first stopped with you; who, if any persons, stopped with him, and the length of time he so stopped, and whether he paid your bills; whether in the customary way, monthly, weekly or how, and whether he paid them promptly in cash or otherwise, and how and what were the respective weekly or monthly bills so paid—if yea, state that they were paid during the year 1849, 1850 and 1851, and the several and respective amounts of such bills as they were made out.

Direct Interrogatories to JAMES A. DORR, of New York City.

1. What is your name, place of residence and occupation?
2. Look at the agreement now produced and shown to you, marked "Exhibit A," and say whether or not your name in your hand-writing is not subscribed thereto, as subscribing witness; was it executed in your presence, and are or not the signatures thereto the genuine hand-writing of Charles Goodyear and Edwin M. Chaffee?
3. Please state whether or not you were acquainted with the pecuniary circumstances of Charles Goodyear at the time said agreement was executed, and during the summer and fall of 1850—if yea, please state his circumstances?
4. Where was he living at that time, and where did his family live, and how many composed his family?
5. From your knowledge of his circumstances was or not said Goodyear able to pay the expenses of the extension of said Chaffee patent, or could he or not have furnished the means to do so, to the amount of four or five thousand dollars?
6. Did you know the Chaffee machine in 1844? was it in operation at that time? Was that the only one you knew of? What was it called, and where was it?
7. Did Mr. Charles Goodyear purchase that machine and the Chaffee patent?
8. Did Mr. Charles Goodyear obtain a patent for the manufacture of India rubber in 1844, and if yea, what was the condition of the India rubber business in the vicinity of Boston after that patent was obtained? Was or not the said Chaffee machine put into operation after Goodyear's patent was obtained by any body—and if yea, when?
9. Has the agreement of May 23d, 1850, been in your possession, and if yea, for how long, and from whom did you receive it, and when, if at all, did you part with the same?
10. Did you know William F. Ely, formerly of the city of New York—if yea, is he alive or dead? Have you heard of him for many years?
11. Please state whether or not you know William Judson, and whether he had in the year 1850, any interest in the tariffs or proceeds from the patents of Charles Goodyear, or in said patents—if yea, what interest.
12. Please state also what relation, if any, Judson sustained during said year, and prior thereto to said Goodyear and his licensees; what services, if any, he performed in their behalf or in regard to said patent during said time; what duties and obligations, if any, he was under to them, and to what matters said Judson devoted his time and attention during said period, and what assistance he had, if any, in said matters. State fully and particularly so far as known to you the connection in, if any, 1850, and part thereto of said Judson with said patents, and the parties owning and interested in the same as licensees or otherwise.
13. Are you acquainted with the hand-writing of said Goodyear and Judson, and if yea, are the signatures to the agreement of August 14th, 1846, in their own hand-writing, and have you marked your initials on the same?
14. Please state what interest you have in Goodyear's Patent, and have you or not been intimately acquainted with all matters connected with the history and management of his patents, and those in which he was interested.

15. Had or not Charles Goodyear, since you have known him, any other source of support or income except what was derived from the granting of licenses under his patents, or otherwise?

16. Please state whether or not at the time of the application for the extension the Chaffee patent and machinery were not in extensive use by Goodyear's licensees, in connection with Goodyear's patent and vulcanizing process, or how otherwise.

17. Please state whether or not Goodyear's licensees used the Chaffee patent and machinery by the license or permission of Goodyear, at the time when the application for an extension was made, and at the time the patent was extended.

18. Did you ever know or understand that any of Goodyear's licensees had a special authority or written license from Charles Goodyear to use the Chaffee patent and machinery?

19. Was Charles Goodyear ever a manufacturer of India rubber goods for sale to your knowledge, or was his business confined to superintending and selling licenses?

20. Was any compensation of any kind ever made or not, to Charles Goodyear for the use of the Chaffee patent and machinery by Goodyear's licensees? And please state whether or not, if there had been, you as interested in Goodyear's patent would have known it?

21. State if you know what was the motive or object of Charles Goodyear in making the agreement of May 23d, 1850, with Edwin M. Chaffee for the purchase of the extension of his patent, and for whose use and benefit, whether it was any part of his intention to ask for or receive compensation from any of his licensees for the use of said patent and machinery.

22. Did you ever know or hear of an agreement between William Judson and Edwin M. Chaffee, dated Sept. 5th, 1850—if yes, when did you first know or hear of the same?

23. Did Charles Goodyear ever know or hear of said agreement—if yes, when to the best of your recollection—if yes, do you know whether he acquiesced in or approved of the same or otherwise? State all you know in regard to it.

THIS INDENTURE WITNESSETH, That Charles Goodyear, for and in consideration of one dollar, and of divers other considerations received by him from William Judson, of the city of New York, hath bargained, sold and assigned, and by these presents doth bargain, sell and assign unto the said William Judson, his heirs, executors, administrators, and assigns, one eighth part of all the right, title and interest of the said Charles Goodyear, of, in, and to any and all the inventions and patent rights as secured to him by patents, and made by or belonging to the said Charles Goodyear, in or about the preparation, manufacture, or composition of India rubber, either in its pure state, or in combination with other materials or ingredients, whether said inventions or rights, or any of them, concern the preparation or composition of India rubber or machinery, for or modes and arts of manufacturing or preparing India rubber, or substances in which India rubber is a component part. And, also, one eighth part of all right and interest of the said Charles Goodyear, from, in, and to any future improvement or inventions which may be made by him, or in which he may become interested in the preparation of India rubber, or the manufacture of the same, and of machinery used for and about the preparation or manufacture of the same. It being distinctly understood, however, that the said Charles Goodyear has not conveyed, and does not intend to convey, any thing herein contained, to the said William Judson, or his representatives, any right of sale or deposition of said inventions, or patent rights. And, it is further distinctly understood, that the said William Judson shall not be entitled to collect or

enforce the payment of said interest hereby conveyed, until a decision of the court on motion for injunction, or by verdict of a jury, whether favorable to the said Charles Goodyear or otherwise, or by compromise with the defendant with consent of the said Charles Goodyear, or his attorney.

IN WITNESS WHEREOF the parties have hereunto set their hands and seals, the fourteenth day of August, one thousand eight hundred and forty-six.

Witness,

WM. F. ELY.

CHARLES GOODYEAR, [SEAL]
WILLIAM JUDSON, [SEAL]

The foregoing is a copy of the paper referred to in the thirteenth interrogatory to JAMES A. DORR.

Direct Interrogatories to CHARLES M. KEELER, of New York city, propounded by the Defendants.

1. What is your name, place of residence and occupation?
2. In the summer of 1850, were you or not employed as counsel in the procurement of the extension of E. M. Chaffee's patent, and if yea, by whom and on whose account, who paid you? Did Edwin M. Chaffee ever employ you, or did you look to him for payment or not?
3. Please state what was the great difficulty in procuring the extension, if any?
4. Had you or not, at that time, as well as since, great experience in procuring patents for inventions, and also in procuring the extension of patents, and had you not been engaged in such business for many years?
5. Please state your knowledge of the probabilities of procuring said extension, and your knowledge of the said patent, and what in your judgment would have been a fair consideration to be paid to said Chaffee, in addition to the payment of expenses in procuring the said extension for the use of said patent, after said extension, provided said Chaffee retained a right to use the same in any business which he might carry on?
6. Did the counsel on both sides pending the application for said extension before the Commissioner of Patents at Washington, express any opinion and make any statements or admission respecting the ownership of the extended patent, or the persons to whose benefit it would ensue; if yea, what was that opinion and admission, and who were the parties to be benefited? state fully.
7. Did you or not, recollect when in Washington, several interviews or conversations respecting said extension, when Mr. Judson and Mr. Chaffee as well as yourself were present? If yea, please state said interviews, and what was said in those interviews when said Chaffee was present, in regard to the person or persons to whose benefit said extension if obtained would ensue—and for whom it was to be obtained, and what did Chaffee say upon the subject?

Direct Interrogatories to JOHN GREACKN, of New York City.

1. What is your name, place of residence and occupation?
2. Are you acquainted with William Judson? And if yea, how long have you been acquainted with him?
3. What business was Mr. Judson engaged in when you first knew him—did he or not, occupy the store No. 100 Broadway? And if yea, what was the business of said store, and for what purposes was it occupied, was there or not a sign? And if yea, what was it and what became of it, and where is it now?
4. Did Mr. Judson remove from the store No. 100 Broadway? And if yea, about what time, and where did he remove to?
5. If you say he removed to the store No. 98 Broadway, please state whether or not he was there in the years 1850, 1851, and afterwards, and what was the business of Judson there, and to what purposes was said store devoted?
6. Who kept the accounts of Wm. Judson when he was at No. 98 Broadway, did he ever have any book-keeper? If yea, who? What if any monies came into your hands for Wm. Judson, for or on account of tariffs paid to him by the licensees of Charles Goodyear, or by J. O. Ackerman, trustee of the shoe associates? If yea, how were said monies disbursed, for what purposes, and under whose directions?
7. Please state whether or not you knew said Judson to be engaged or employed in any suit or suite as attorney or counsellor at law, otherwise than on Goodyear's patents.
8. What portion of time was taken up by said Judson, in the India rubber business?
9. Did you know Edwin M. Chaffee in 1850? and if yea, was he or not frequently in the store No. 98 Broadway. Did you or not have conversations with him, or were there or not conversations between him and Mr. Judson in your presence, respecting the extension of Chaffee's patent before it was obtained? If yea, what if any thing was said in their conversations as to whose benefit said patent was to be extended—state as near as you can recollect.
10. Was you in 1850, or previous thereto, one of Charles Goodyear's licensees, to use his patented vulcanizing process?
11. Were, or not the licensees of Charles Goodyear frequently, or how often at No. 98 Broadway, to see and consult Wm. Judson about Goodyear's patents, and their interests under them?
12. Do you know Hiram Hutchinson? and if yea, was he ever or not at No. 98 Broadway—if yea, how frequently to see and consult with Mr. Judson during the spring and summer of 1850, as well as at other times.
13. If you have not referred, please to refer to any memorandum or books of accounts, in regard to any of the above matters inquired into?
14. Had you at the time when the application for the extension of the Chaffee patent was about to be made, and was pending, a factory in which the Chaffee patent and machinery were used?
15. Did you consent to, or approve of the application, for the extension of said patent—and if so, why?
16. Did you as a licensee of Charles Goodyear, or did any of the other

licensees of Charles Goodyear, so far as you know, use by his permission, the patent and machinery of Edwin M. Chaffee prior to the extension—if yea, was such permission in writing or not, and was any thing paid for such permission or not?

17. What was the pecuniary condition of William Judson, in the years 1850, 1851 and 1852?

Direct Interrogatories to HOLBERT SMALES, of New York City.

1. What is your age, place of residence and occupation?
2. Were you ever employed to oppose the application of Edwin M. Chaffee for an extension of his patent, dated August 31st, 1836—and if yea, by whom; was you or not so employed by Horace H. Day among others?
3. Who was the most active opponent of that extension, so far as you know, in so far as you acted in the matter—was it or not, Horace H. Day?
4. Please state whether or not, a draft of a paper or petition of which the annexed is a copy, marked B., was or not prepared by you in your office? If yea, was Mr. Day present on said occasion, or did he advise it, or consult and advise with you about it or in preparing it? Was or not Mr. Hartshorn present? Was Mr. Newell present?
5. For whom, or on whose account, or by whose request, did you prepare and put in said petition of Newell? Among others, did or not Horace H. Day request it? Did he or not know about it?
6. On whose petition or remonstrance was the examination of witnesses taken before the Commissioner in New York, that you attended? Who directed the papers, or testimony taken by you before the Commissioner in New York, to be sent on to Washington? was it, or not, Horace H. Day?
7. Do you recollect whether or not you gave said petition to Day, to be forwarded to Washington, after it was prepared?
8. In whose employ was Mr. Newell at this time? Was he or not a clerk of Horace H. Day, or what was his business as far as you know?
9. Was or not Horace H. Day, in attendance before the Commissioner in New York, in taking testimony in opposition to the extension? Was he or not almost constantly in attendance, or how often? Did not Mr. Day himself examine the witnesses? Did or not Charles M. Keller, appear as counsel for the extension, and did or not William Judson?
10. Did you or not attend in taking testimony to oppose said extension in Boston—if yea, on what day of the month and time of day, did you leave New York for Boston, and on what day and time of the day did you leave Boston on your return? Did or not Mr. Judson go on to Boston with you, or in the same train as yourself on the same day, or did you or not find him in Boston on your arrival there?
11. What day of the week was it that you returned from Boston to New York? Did or not Mr. Judson return to New York in the same train with you, or on the same day?
12. Please state whether or not you have referred to memoranda to refresh your memory on the above matters inquired into?
13. Did H. H. Day ever say in your presence, or to you, whether or not

he had given a deposition in the matter of the extension of said Chaffee's patent, a copy of which marked C., is hereto annexed.

14. Has said Day ever made the statements in said paper, contained in your presence or hearing—if yea, when and where?

Direct Interrogatories to GEORGE J. S. THOMPSON, of New York.

1. What is your age, place of residence, and occupation; and what was your occupation in 1845, 1846? and did you know Wm. Judson at that time? and how long have you known him?

2. What was Mr. Judson's occupation and employment in 1845—1846? Was he or not engaged in the India rubber business, and if yea, to what extent, and in what patent or patents, and what were your means of knowledge, and what your acquaintance with him?

3. What, if any, other business had Judson than the India rubber business since 1845-'6, so far as you know, please state your means of knowledge—and whether he was retained or employed as an attorney or counsellor at law, in any suit or suits, or had any sign up as such, or office as such, or acted as such, except in the India rubber patents, or in suits in which he was personally interested.

4. Please state whether or not you were in the employment of William Judson in the years 1848 and 1849, and subsequent thereto; and if yea, where was his (Judson's) place of business—who hired or leased the premises? and who, if any body, was interested in the business there besides Mr. Judson, and what was the business there, and in what way, if any, was said business connected with Charles Goodyear, his patents, or licensees? What, if any, sign was on the store? please state your means of knowledge, and the way you are able to fix the dates?

5. Do you or not know that William Judson was interested in the India rubber in Philadelphia, and if yea, to what extent, and who was interested with him? Had he or not a store in Philadelphia, and if yea, at what time and to what objects was said store devoted, and how was it known or designated?

6. When did you leave the employment of Mr. Judson, and who was his clerk after you left? Were you engaged in any business transactions for Mr. Judson in 1850, and if yea, what were they, and what compensation did you receive from him?

7. Do you know Horace H. Day, and did you know him in 1846—if yea, please state whether or not said Day did not call upon said Judson frequently, or how often, at the Franklin House in New York, and if yea, what was the subject of their interviews?

8. What was the pecuniary condition of William Judson in the years 1850, 1851 and 1852?

Direct Interrogatories to NATHANIEL JARVIS, Jr., of New York.

1. What is your age, place of residence, and occupation?

2. Did you know William Judson in the years 1848, 1849, and 1851? If

yea, what was his business, and where? Please state whether or not he had any law office, or was a practising lawyer or attorney at that time, and your means of knowledge on the subject?

Direct Interrogatories to HENRY E. CLARK, of New York City.

1. What is your age, place of residence, and occupation?
2. Are you acquainted with William Judson, and how long have you known him?
3. What has been his business and occupation since you have been acquainted with him, and to what has he directed his time and attention, and to what extent?
4. Has he been a practising attorney or counsellor since you have known him, otherwise than as connected with Goodyear's patents in the India rubber business—please state your means of knowledge on this subject?
5. Had or not Mr. Judson a store in Broadway, and if yea, about what time was this? What, if any, sign was over the store, and what was the business done there, and were you or not frequently there? Did Mr. Judson remove from said store, and if yea, where and what was his business there?
6. What was the pecuniary condition of William Judson in the years 1850, 1851, and 1852?

Direct Interrogatories to WILLIAM P. BUCKMASTER, of New York.

1. What is your age, place of residence, and occupation?
2. Were you or not acquainted with William Judson in the spring and summer of 1850?
3. Did you or not know Edwin M. Chaffee in the summer of 1850 and after?
4. What was your occupation in the spring and summer of 1850, and where was it—in what store and number? Where was Mr. Judson's place of business in that year and afterwards, and in what business was he engaged?
5. Had he any other kind of business than the India rubber business or not, and how much of his time did it occupy? Did he or not have a store in Philadelphia?
6. Was or not Mr. Judson a practising lawyer at the time when you were with him, or had any sign up as such, or did any law business, or engage in any suits, other than the India rubber cases and those in which he was personally interested? or how otherwise.
7. Were or not Goodyear's licensees in the habit of seeing and consulting with Mr. Judson during the year of 1850, and after; and if yea, how often?
8. Did you or not see Edwin M. Chaffee in the store, No. 98 Broadway, conversing with Mr. Judson; and if yea, how often? and at about what time was this?
9. Did you know a man by the name of George Woodman; if yea, did you ever see him in the store, No. 98 Broadway, and if yea, about what time was

this? Did you pay him any money, or see it paid? and how much, and on whose account, and what was said at the time?

10. Did you or not pay Chaffee any money about the same time, and if yea, when, and how much, and on whose account, and where was Mr. Judson at the time?

11. If any money was ever paid by you to Mr. George Woodman, or to Mr. Edwin Chaffee—please state where it was paid, on whose account, at what time and place, and the amount of each of said payments, and what was said by either of them at the time of said payments, and how you are enabled to state the above facts?

Interrogatories to SAMUEL MARSH, of the City of New York.

1. What is your age, residence, and occupation?

2. Have you ever been engaged in the manufacture of India rubber goods; if yea, when and where?

3. If you used machinery in said manufacture, please state from whence you procured the same, and by whom it was made, according to the best of your recollection and belief?

4. Please describe the kind of machinery so used by you as particularly as you can?

5. Did you or not use machines for the grinding of rubber; if yea, describe them?

6. Did you or not use machines for the spreading of rubber on cloth; if yea, describe them?

7. From whence did you obtain the machines aforesaid, used for the grinding and spreading rubber, and what year or years were they obtained and used by you?

Interrogatories to WILLIAM ATKINSON, of Brooklyn.

1. Please state your present residence and occupation?

2. State your residence and occupation in the year 1834, and for several years thereafter?

3. Did you ever take out any letters patent for inventions connected with the manufacture of India rubber goods?

4. What was the condition of the art of manufacturing India rubber goods in the years 1834, 1835, 1836, and 1837? What was the number of companies employed in said business at that time—where located, and what became of said companies, and to what extent did they vary on the business?

5. Did you ever use or know of the use of any machines for grinding rubber; if yea, were such machines used as early as the year 1834 or not?

6. Were such machines constructed, in part, of cylinders; if yea, of what materials were they made—were they hollow or solid, and how many were they?

7. Were said cylinders heated or not; if yea, how?

8. Prior to the use of said machines, by what method was rubber prepared for use, and in what way was it spread upon cloth?

9. What were the advantages gained by the use of said machinery, over said former process, and what was the per centage of saving, if any?

10. For what purpose were solvents used by you, in connection with said machines, if used at all?

11. Was the said or similar machines used for spreading rubber on cloth or other substances, as well as for grinding and preparing rubber?

12. Were such machines made by you, or your order, for the use of other persons or companies; if yea, when, and for whom?

13. Were the machines you have described in open and public use as early as the year 1834, or not?

14. Were other materials used or not in connection with India rubber? State the materials, according to the best of your recollection, that were thus used, and how they were combined with the rubber?

15. Was the use of solvents, in connection with said machines, if used at all, increased or diminished as in the progress of the business, and did the use vary with the nature and kind of the rubber?

16. What was the state or consistence of the rubber mass when prepared for spreading?

Interrogatories to JAMES McCULLY of Brooklyn.

1. What is your age, residence, and occupation?

2. Have you ever been engaged in the manufacture of machines for grinding rubber (3) or for spreading; if yea, where and when?

4. Please describe the same fully and minutely?

5. State whether hollow metal cylinders formed any portions of such machines or not?

6. Were the same heated or not; if yea, how?

7. Were said machines in open and public use, or otherwise?

8. Were such or similar machines used for grinding and preparing rubber; also for spreading the same on cloth?

9. Were other materials besides rubber used in connection with it in grinding and preparing rubber for use; if yea, what materials state—according to the best of your recollection, all that were thus used, and how they were prepared and mixed with said rubber?

Direct Interrogatories to be propounded to JOHN J. HOWE, of Derby, Conn., ARCHIBALD HOYT, of Troy, New York, ELIJAH BRADY, of New York City, CHEFSMAN ACKERMAN, and CHARLES GREGG, of Brooklyn, in the State of New York, under commissions to take testimony to be used in the trial of an action at law, now pending in the United States Circuit Court for the Rhode Island District, wherein HORACE H. DAY, is Plaintiff, and ISAAE HARTSHORN, *et als.* are Defendants.

Direct Interrogatories to be propounded to ARCHIBALD HOYT, of Troy, New York, on behalf of the Respondents.

1. What is your age, residence, and occupation?
2. How long have you been acquainted with, or engaged in, the manufacture of India rubber?
3. How long since machinery has been used in the manufacture of India rubber, to your knowledge?
4. Have you known any machinery to be used in said manufacture, of which machinery cylinders formed any portion; if yea, of what materials were said cylinders—were they solid or hollow? How did they revolve, with an even or unequal motion? How many cylinders were there in said machines? Were they heated or not; if yea, how?
5. In what manner was the rubber worked in or by said machinery? describe the process particularly?
6. Were any other materials used, in connection with said rubber, in the manufacture thereof; if yea, what materials, and how were the same compounded or otherwise used with said rubber?
7. State the earliest time at which, to your knowledge, such machines and such processes, as you have described, were used?
8. What kind or style of manufactured India rubber goods are you now making?
9. Do you use camphene or not?

Direct Interrogatories by the Defendants, to JOHN J. HOWE, of Derby, Conn.

1. What is your age, residence, and occupation?
2. Have you ever been engaged in the manufacture of India rubber; if yea, when and where?
3. Did you ever make any invention or take out any patent for improvements in the process connected with the manufacture of India rubber; if yea, when, and state the nature of said improvements?

4. Please describe the machines of any ever used by you, or used with your knowledge, in the process of manufacturing India rubber—and state where they were first used, and the manner in which they were used?

5. Were the same in open and public use, or not? state particularly.

6. Were any materials used by you, or to your knowledge, in connection with the India rubber, in the process of manufacturing the same; if yea, what materials?

7. State the manner in which said materials were used in connection with said India rubber?

8. If not already fully stated by you, please describe the process by which the said materials were compounded with rubber, and the process by which the rubber was prepared or manufactured, in connected with said machines?

AMES, BRADLEY & PITMAN,
for the Defendants.

Direct Interrogatories to be propounded to ELIJAH BADY
of New York City, State of New York, on behalf of
the Defendants.

1. What is your age, residence and occupation?

2. Did you ever use or know of the use, or make or know of the making of any machines for grinding rubber? If yea, were such machines used as early as the year 1834 or not?

3. Were such machines constructed in part of cylinders? If yea, of what material were the cylinders made, were they hollow or solid, and how many were there in one machine, did they revolve. If yea, with an even or unequal motion?

4. Were said cylinders heated or not. If yea, how?

5. Were the said or similar machines used for spreading rubber on cloth or other substances as well as for grinding and preparing rubber?

6. Were such machines made by you or your order for the use of other persons or companies. If yea, when and for whom?

7. Were the machines you have described in open or public use, or not?

8. If you answer the seventh question in the affirmative, was this open and public use as early as the year 1834 or not?

Direct Interrogatories to be propounded to CHEESMAN
ACKERMAN of Brooklyn, in the State of New York, on
behalf of the Defendants.

1. What is your age, residence and occupation?

2. Did you ever use or know of the use, or make or know of the making of any machines for grinding rubber. If yea, were such machines used as early as the year 1834, or not?

3. Were such machines constructed in part of cylinders. If yea, of what

material were the cylinders made, were they hollow or solid, and how many were there in one machine, did they revolve. If yea, with an even or unequal motion?

4. Were said cylinders heated, or not. If yea, how?

5. Were the said or similar machines used for spreading rubber on cloth or other substances as well as for grinding and preparing rubber?

6. Were such machines made by you or your order for the use of other persons or companies. If yea, where and for whom?

7. Were the machines you have described in open and public use, or not?

8. If you answer the seventh question in the affirmative, was this open and public use as early as the year 1884, or not?

Direct Interrogatories to be propounded to CHARLES GREGG of Brooklyn in the State of New York, on behalf of the Defendants.

1. What is your age, residence and occupation?

2. Did you ever use or know of the use, make or know of the making of any machines for grinding rubber. If yea, were such machines used as early as the year 1884, or not?

3. Were such machines constructed in part of cylinders. If yea, of what material were the cylinders made, were they hollow or solid, and how many were there in one machine, did they revolve, and if yea, with an even or unequal motion?

4. Were said cylinders heated or not. If yea, how?

5. Were said or similar machines used for spreading rubber on cloth or other substances as well as for grinding and preparing rubber?

6. Were such machines made by you or your order for the use of any other person or companies. If yea, where and for whom?

7. Were the machines you have described in open and public use, or not?

8. If you answer the seventh question in the affirmative, was the open and public use as early as the year 1884, or not?

UNITED STATES OF AMERICA.

RHODE ISLAND DISTRICT, SS.

{ CLERK'S OFFICE, CIRCUIT COURT,
{ AT PROVIDENCE, *January 5th, 1885.*

I Henry Pitman, Clerk of said Court for said District, do hereby certify that the foregoing thirty-six pages contain true copies of the original Interrogatories now on file in this office in the Case at Law Horace H. Day vs. Isaac Hartshorn, et al. Duly examined and compared.

In Testimony whereof I have hereunto set the seal of said Court and my hand on the day and year above written.

HENRY PITMAN, *Clerk.*

UNITED STATES CIRCUIT COURT.

RHODE ISLAND DISTRICT, SS.

HORACE. H. DAY

vs.

AT LAW.

ISAAC HARTSHORN, et. al.

Cross Interrogatories propounded by Plaintiff to JOHN C. WHEELER, JAMES N. DORR, CHARLES M. KELLER, JOHN GREACEN, HOLBERT SMALES, GEORGE G. S. THOMPSON, NATHANIEL JARVIS, JR., HENRY E. CLARK, WILLIAM P. BUCKMASTER, SAMUEL MARSH, WILLIAM ATKINSON, and JAMES McCULLY, witnesses, proposed to be examined under a commission by Defendants.

To the interrogatories propounded to John C. Wheeler, the plaintiff objects, on the ground that the same are immaterial, and declines examining the witness.

Cross Interrogatories to JAMES A. DORR.

The plaintiff objects to the second interrogatory in chief.

First Cross Interrogatory.

If you state that you know any thing of the pecuniary circumstances of Charles Goodyear, during the time inquired of in the third interrogatory in chief—state particularly all you know about it; whether he had real or personal estate, and where it was, and its value?

To the fifth (5th) interrogatory in chief, plaintiff objects as leading, as asking the opinion of witness, and not for facts known by witness, and as immaterial:

Second Cross Interrogatory.

If you say you knew the Chaffee machine in 1844, state all you know of it of your own knowledge, but nothing by hearsay.

The plaintiff objects to the seventh interrogatory in chief, as asking to prove sale of patent by parole, which must have been in writing.

Third Cross Interrogatory.

State every person that was in the India rubber business, and where, and to what extent, in the United States, in the year 1844; the amount of business done by each, so far as you know, and be particular in giving the names of the firms, and their places of business in that year, and the kind of goods made by each.

Fourth Cross Interrogatory.

Plaintiff objects to eleventh interrogatory, as asking the evidence of witness by parole, of matters in writing; and for this purpose asks the witness,

Q. Whether, whatever interest, if any, the said Judson, mentioned in said eleventh interrogatory, was not in writing, and where said writing, if any exist, are?

Fifth Cross Interrogatory.

The plaintiff objects to the twelfth, as it asks the contents of written papers, and asks the witness,

Q. Whether the contract under which said Judson acted for said Goodyear was not in writing, and if so, whether witness has seen them, and where they now are?

The plaintiff objects to so much of the eighteenth interrogatory in chief, as asks the understanding of the witness, and insists that the licensees of Goodyear's licensees were in writing, and should be produced, and parole evidence not given of their contents.

Sixth Cross Interrogatory.

In the twentieth interrogatory you are inquired of in reference to the compensation made Goodyear for the use of the Chaffee patent—you will please state your own personal knowledge on that subject, precisely what you personally know, aside from what you may have read, or may have been told you by Goodyear or others.

The plaintiff objects to the twenty-first interrogatory as leading, and also asking the motives and objects of Goodyear, which motives could not be known, and if known, are improper and immaterial.

Seventh Cross Interrogatory.

Have you not been actively engaged in this Chaffee litigation, as a party thereto, and are you not interested in this suit.

Eighth Cross Interrogatory:

Have you not, within a few months, filed a bill in a court in the State of New York, in which you are one of the plaintiffs, together with William Judson and Charles Goodyear, against this plaintiff and Chaffee, in which you claim to own the Chaffee extended patent, and is not said bill signed and sworn to by you.

Cross Interrogatories to CHARLES M. KELLER.

The plaintiff objects to the testimony of this witness in this case, on the ground that he acted as the counsel of the said Edwin M. Chaffee, the plaintiff's grantor, in procuring the extension of this patent, and cannot now be permitted to testify to confidential communications, and hence cannot be permitted to answer the interrogatories propounded to him, and only examines him that the position of witness in this respect may fully appear to the court. The plaintiff also especially objects to the fifth interrogatory, as asking the opinion of witness on immaterial subjects. And to the sixth interrogatory, on the ground of hearsay and impertinence; and to the seventh interrogatory, as especially within the general objection taken above to the testimony of this witness.

Cross Interrogatories.

1. Did you argue the question of this extension; was it in writing, and did you sign the argument as counsel for Chaffee?

2. Did you not urge the commissioner to extend the patent for Chaffee's benefit, and claim to act as Chaffee's counsel before him?

3. Were you called as a witness in a case in the Circuit Court of the United States for the Southern District of New York, between Horace H. Day and the New England Car Spring Company; and did you not in that case testify that you acted as the counsel of Mr. Chaffee in procuring the extension, and that you signed the argument made by you as his counsel?

4. Did you not urge the commissioner to extend the patent upon the ground, among others, that Chaffee was poor, and had never received any reasonable compensation for said invention?

5. Have you a copy of your argument in that case, and will you annex it to your answer to this question?

6. Have you any knowledge of the value of the Chaffee patent for the extended term?

7. Do you know how much saving is effected by the use of the Chaffee process over the old process?

8. Saying nothing of the chance of the extension being granted, when and after it was granted, have you any fixed opinion of its value; and if so, state how that is formed; from what date, and all the circumstances that go to make up your estimate?

Cross Interrogatories to be propounded to JOHN GREACEN, of New York City.

1. When Judson occupied the store, No. 100 Broadway, what room did he occupy; did he not have a room partitioned off either up stairs or below; and did he not have a law library or law books, and a desk; and do you know that he did not do law business therein?

2. Did not William Judson have a sign with his own name, at that time, at some place within or without the store?

3. When Judson was at 98 Broadway, New York, did he not have a private room partitioned off, and used by him as an office; did he have any sign; was not William Judson, as a sign, up about the premises, and had he not books?

4. Did you keep any accounts, except those of the store, at 98 Broadway, and what?

The plaintiff objects to the thirteenth interrogatory in chief, or so much as refers to accounts not produced.

The plaintiff objects to the fifteenth interrogatory as improper, in not asking facts but motives of witness.

HOLBERT SMALES, no Cross Interrogatories.

Plaintiff objects to each and all the questions proposed to him.

Cross Interrogatories to GEORGE J. S. THOMPSON.

1. Did not Judson have a sign up, and a room, and law books in 1848 and 1849, and afterwards?
2. Do you know that William Judson did not frequently act as attorney for parties in the years 1846, 1847, 1848, 1849, 1850, and 1851?
3. Has Wm. Judson had any available property which could be taken on execution for the last ten years, and if yea, answer when, where, and what property.

Cross Interrogatories to NATHANIEL JARVIS, Jr.

1. Has not Wm. Judson acted as attorney, or as counsel, or both, in various suits in the time named in the second interrogatory in chief, and do you know that he has not?

Cross Interrogatories to HENRY E. CLARK.

1. Has not Wm. Judson been engaged in suits as attorney and counsellor since you have known him?
2. Is he not an attorney at law?
3. Do you know that Wm. Judson has not been engaged as attorney in various suits, during the years 1846, 1847, 1848, 1849, 1850, 1851, and 1852?
4. Has it not been generally understood that Judson had no visible property or do you know of any property owned by him during the years 1846, 1847, 1848, 1849, 1850, 1851, 1852, and 1853, and if so, when, what was it, and where situated—state particularly.

Cross Interrogatories to WILLIAM P. BUCKMASTER.

1. Do you know that Wm. Judson did not do attorney and counsel business during the time spoken of in your examination in chief?
2. Are you now employed by Wm. Judson or interested in the India rubber business?
3. If you say you paid any money to George Woodman, state the day of the week, the hour in the day, and all the circumstances under which it was paid, and who was present; if in a check, whose check, and what bank it was on, and out of what funds, and from what the funds were derived.
4. The same question as the last as to money paid to E. M. Chaffee.
5. Have you ever testified on the subject now inquired about, and if so, when and where?
6. When you testified in the case of Day vs. The New England Car Spring Company, did you have books in court to refresh your recollection, and whose books, and where are they now?

7. Did you make the same statement in that case that you have above, and if not, wherein did it differ?

Cross Interrogatories to SAMUEL MARSH.

1. What was the nature of your connection with the manufacture of India rubber goods; were you personally, practically engaged in the factory, or were you a member of the company during the factory.

2. What kind of solvents did you use in preparing the rubber?

3. What were the quantities used in proportion to the quantity of rubber?

4. State as particularly as you can how the rubber was prepared, and what was its condition and consistency before it was passed through the machines?

5. What became of the machines of which you have spoken?

6. If the machines you referred to contained rollers, state the size of such rollers; by what mechanism they were operated; of what material they were made, and what was their mode of operation?

7. Were any portions of said machines heated, and if so, how?

8. If you have any drawings or models of such machines, please annex them, or produce them, as exhibits to the commissioner.

Cross Interrogatories to WILLIAM ATKINSON.

1. Is one of the patents to which you refer in your answer to the third direct interrogatory, the patent for your improved machine, for the purpose of spreading caoutchouc, or India rubber, in solution upon cloth, or other materials, and of drying the same by steam, dated August 15th, 1855?

2. Will you annex a copy of the specifications of said patent, and produce and exhibit any drawings or models of the machine therein described, if you have such?

3. Are the machines which you refer to, in your answers to the direct interrogatories, machines constructed and operated according to the description in said specification?

4. Is the purpose and object of your machines correctly stated in those specifications?

5. If you describe any other and different machines from them, described in those specifications, or machines used for any other purpose, will you state when they were built, by whom, where, by whom operated, how long they were operated, what became of said machines, and also give their dimensions, material, mode of construction, and operation in every part?

6. If you describe any machine as used for grinding rubber, in which a cylinder revolved in a stationary concave bed or trough, will you state whether the surface of the cylinder did not have blades or cutters or knives affixed to it, or ribs, or rough or sharp projections set into places cut out for it?

7. Was not the concave surface of the bed or trough, rough or corrugated?

8. Was not such concave bed or trough kept filled with water?

9. Was not such cylinder solid?

10. Was not the rubber which passed through such machines cut into strings or strips, or ground into small grains?

11. Do you know of any more than one machine of this construction ever being built or used, and if more than one, state where, when, and by whom, prior to 1886?

12. When did you commence business, and where and when did you stop?

13. Did you at any time carry on the rubber manufacture in New York, and if so, when did you begin there; and when did you stop?

14. Was not your business kept secret, and were not all strangers and persons not connected with your concern, kept out of your manufactory, and not permitted to examine the process used by you?

15. What kind of solvents did you use in preparing the rubber, before passing it through your patented machine, and what proportion of solvents to the quantity of rubber used, prior to 1886?

16. Did you not in your process for spreading rubber under your patent, first dissolve the rubber in spirits of turpentine or other solvent, and then pass it through the rollers, and scrape it off with a thin, straight-edged steel plate, for the purpose of mixing it to a uniform consistency?

17. Were not the checks, or pieces of wood described as resting upon the rollers near their ends, necessary to prevent the rubber in solution from flowing out or spilling at the ends of the rollers?

18. Was not steam used in your machinery, whether in the drum, roller or box, for the sole purpose of drying out the spirits of turpentine, or other solvent which held the rubber in solution, more rapidly than by other modes of drying the fabric?

19. Had the steam drum, or box, described as heated by steam, any other use than that of drying out the solvent and hardening the rubber, and to support the cloth in its place as an endless band?

20. How many coatings of rubber were placed upon the cloth? State the number for different fabrics.

21. State when and where you first heard of Chaffee's invention?

22. Who worked for you in making the machinery above referred to, and was not Charles Gregg one of such workmen?

Cross Interrogatories to JAMES McCULLY.

1. When, where, and for whom were you engaged in the manufacture of machines for grinding or spreading rubber?

2. What was your business at that time?

3. By whom were the rubber machines operated, and at what place and in what factory or establishment?

4. What has become of those machines?

5. Was not the building or room in which such machines were operated kept private, and admittance therein refused to strangers and persons not connected with the establishment?

6. If you state that cylinders formed portions of such machines, state the length of such cylinders, their number, their diameter, their weight and how they were placed in the machine with reference to each other, and how they were operated; and also the size and weight of the frame and other parts.

7. Do you know of your own personal knowledge the reason for admitting steam into either of these cylinders, or that steam ever was admitted into them when in operation?

8. If you worked in the manufacture of India Rubber before 1886 state when you began, where, how long you worked, who worked with you, and what department you worked in.

9. What solvents were used for dissolving the rubber in the establishments for which you built the machines before mentioned?

10. Was the machinery which you built patented? If so, by whom?

11. If you say that it was patented, will you state whether you have ever examined such patent, and whether the machines were built according to the specifications therein contained?

Cross Interrogatories to JOHN G. HOWE.

1. Were you examined as a witness in opposition to the extension of the Chaffee patent?

2. What counsel cross-examined you on the part of E. M. Chaffee?

3. What was about the whole amount of your receipts from the sale of India Rubber goods while engaged in the manufacture?

4. Were your operations any thing more than experiments, and did you not abandon the experiment and the business?

5. Will you annex copies of the specifications of any patent you may have taken out for improvements in the manufacture of India Rubber, and also drawings of any machines used by you, and models of the same if you have any?

6. What was the length, diameter and weight of any rollers or cylinders used by you?

7. What was the size and weight of the frames in which the rollers revolved?

8. Did you not use spirits of turpentine as a solvent, and sometimes alcohol, in connection with spirits of turpentine, in the manufacture of India Rubber?

9. When you manufactured rubber did you not cut up the slab rubber into thin pieces, and thus subject it to the action of solvents in sufficient quantity to make it of the consistence of paste, soft as soft dough?

10. Did you not then mix the dry materials with the rubber paste?

11. Was not this paste thus combined with other materials, then passed through the machine described, for the purpose of reducing the paste and other ingredients to a uniform consistence? Was not that the sole object of the machine?

12. Was not the rubber before being passed through the machine, in all cases so softened by solvents as to form a paste or plastic substance?

13. What became of the machines constructed by you?

Cross Interrogatories to ARCHIBALD HOYT.

1. When did you first engage in the manufacture of India Rubber, at what place, in whose employment, in what department of the manufacture, and state

all the persons whom you remember as having worked with you in the same department previous to 1886?

2. What became of the machines referred to by you in your direct examination?

3. Who built those machines?

4. What was the length, diameter and weight of the cylinders, of what material were they made, how were they operated, what was the size and weight of the frame on which they rested and how were the machines operated?

5. What kind of solvents were used in the manufacture of rubber at the time you speak of?

6. Was not all the rubber softened or rendered plastic like paste or dough by spirits of turpentine, or other solvent before being passed through the machines spoken of?

7. Was not the rubber scraped from the roller by a straight-edge of steel?

8. Was not the rubber spread upon cloth and other fabrics by a scraper or knife?

9. Describe the machine or tool by which it was spread upon the cloth or other fabric?

10. Was not water used in connection with the rollers you have spoken of?

11. What was done with the rubber after it had passed through the rollers?

12. How was the solvent expelled or dried out of the rubber?

13. Annex any drawings and produce any models you may have of such machines.

Cross Interrogatories to ELIJAH BADDY.

1. What was your business previous to 1886?

2. Where were you acquainted with the machines spoken of in your answers to the direct interrogatories? to whom did they belong? who built them? how long were they used? and what has become of them?

3. How do you fix the dates already given?

4. Have you been acquainted with a patent granted to William Atkinson for machinery and in the manufacture of India rubber?

5. Were the machines you have described built in accordance with the specifications of that patent? or were they at the time said to be so built?

6. Were not the processes or modes of manufacturing rubber at the factory where these machines were used kept private, and were not strangers and all persons excluded except such as were connected with the concern?

7. Were not spirits of turpentine or other solvents used to dissolve the rubber in the factory where these machines were used?

8. Was not the heat derived from steam or other sources, and used in connection with the rollers in these machines, solely for the purpose of drying the solvents out of the rubber?

9. State the length, diameter, and weight of the rollers, and the size and weight of the frames, and the material of which they were made in these machines.

Cross Interrogatories to CHEESMAN ACKERMAN.

1. Where did you reside, and what was your occupation, and for whom did you work previous to 1836, in the rubber business?
2. Describe the material of which the machines you may have referred to in your answers to the direct interrogatories were composed; and give the length, diameter and weight of the cylinders, and the size and weight of the frames—and state how the machines were operated?
3. What has become of those machines?
4. Who worked with you at the time you were acquainted with the machines referred to?
5. Was steam used in connection with these cylinders?
6. Was not all the rubber which was passed through the machines referred to, dissolved or made soft and pasty by spirits of turpentine, or other solvents?
7. Was not the rubber when spread upon cloth soft and almost liquid?

Cross Interrogatories to CHARLES GREGG.

1. What was your occupation previous to 1836?
2. By whom were you employed in the building of the machines referred to in the answers to the direct interrogatories, and where and when were such machines built and operated, and what has become of them?
3. If in answer to the second direct interrogatory you should say that you knew of machines for grinding rubber, previous to 1836, will you describe particularly such machines, and produce and annex any drawings, or models, you may have of any such machine or machines?
4. How many such machines were you acquainted with previous to 1836?
5. If you say that rollers or cylinders were used in such machines, will you describe such rollers particularly—state their length, diameter, material and weight; the size, weight and material of those frames; how and by what power they were operated?
6. Was not what the direct interrogatories called the grinding and the spreading of the rubber performed in different machines?
7. Describe as particularly as you can what was called the spreading machine; state length, diameter, material and weight of cylinders—size, weight and material of frames—how and by what power operated?
8. Was not water used in connection with what is called the grinding machine—and if so, state how, whence procured and in what quantities?
9. Were there not ribs, or rough projections upon the surface of the cylinder used in what is called the grinding machine; and was not the surface of the bed or trough in which it revolved also rough?
10. Was not the rubber cut into strips or strings, or into small particles by the operation of the machine?
11. Are you engaged in the manufacture of India rubber, have you ever been, and do you know any thing about the process used in said manufacture?
12. Have you ever been acquainted with the patent for India rubber

machinery, granted to William Atkinson, and will you state whether the machines above referred to were built in accordance with the specifications of that patent?

13. Do you know of your own knowledge, for what purpose steam or other heat was used in the machines which you have described, if it was so used at any time?

14. Were not said machines kept private, in a building or room to which strangers and persons not connected with the concern, were not admitted?

15. Were you not examined as a witness in opposition to the application for the extension of the Chaffee patent, and did not William Jackson cross examine you at that time as counsel for E. M. Chaffee?

Cross interrogatories to the witnesses produced by the defendants.

N. RICHARDSON,
T. A. JENCKES,
of Counsel for Plff.

CIRCUIT COURT OF THE UNITED STATES,

RHODE ISLAND DISTRICT, SS.

HORACE H. DAY

VS.

ISAAC HARTSHORN, *et als.*

Interrogatories to be propounded in the above entitled cause, on the part of the defendants, to Charles Good-year, now of London, in the Kingdom of Great Britain, &c.

1. For how many years, if any, have you been connected with the manufacture of India rubber, as an inventor or experimenter, or otherwise? State in what manner you have been thus connected, if in any, and during what periods of time?

2. Who was the owner of the patent issued to Edwin M. Chaffee, dated August 31, 1836, for an improvement in the application of undissolved caoutchouc to cloth, leather, &c., in the machinery used in the process, at and prior to the extension of the same on the 31st August, 1850, and how and for what consideration did such owner obtain said patent, and at what time did he become the owner of the same?

3. At the time you became the owner of the said patent, if you have said that you were the owner, to what extent, if at all, were the processes and machinery—claimed to be covered by said patent—in use, if at all?

4. Were the processes and machinery described in the Chaffee patent ever used in connection with the vulcanizing process—patented by the patent issued to you June 15, 1844, and re-issued December 25, 1849, for a new and useful improvement in processes for the manufacture of India rubber?

5. What measures, if any, were taken by you to introduce the use of said process and machinery in connection with said patented vulcanized process?

6. What experiments, if any, and at what expense were tried, under your

direction, for operating said processes and machinery in connection with said vulcanizing process?

7. What length of time elapsed between the commencement of said experiments and the first use of said processes and machinery in the manufacture, or in connection with said vulcanizing process?

8. When were said processes and machinery first used in connection with said vulcanizing process, and by whom?

9. Were the persons so using the same manufacturers of India rubber, and if so, what kind?

10. Were they manufacturing said India rubber under any patent or license to use any patent, and if so, what patent and whose license?

11. What difficulties, if any, were there in inducing said parties in using said processes and machinery, and what efforts, if any, were these difficulties overcome?

12. Who next used the processes and machinery claimed to be covered by the Chaffee patent in connection with said vulcanizing process, as your licensees or otherwise?

13. What was the process adopted by the manufacturers of vulcanized rubber, as licensees from you, previous to the use by them of the process and machinery claimed to be covered by the Chaffee patent?

14. What difficulties, if any, existed in inducing them to make the change?

15. What was your object in the introduction of said processes and machinery in connection with said vulcanizing processes?

16. By whom were the said processes and machinery finally used, and when were they adopted by said parties?

17. Among the parties who used said processes and machinery, who, if any, were licensees of said vulcanizing process prior to the extension of the Chaffee patent?

18. By what right or permission, if any, did said licensees of the said vulcanizing process use said process and machinery, and how was said commission or right given or expressed—in writing, if so, what writing, or orally, or otherwise?

19. Upon what terms or conditions, or upon what compensation, if any, in addition to the compensation paid for said license, to use said vulcanizing process, if any thing, were your licensees allowed to use said processes and machinery?

20. Was said use of said Chaffee's process and machinery by your license without making any compensation, if so did they use them for your interest or otherwise.

21. For what purpose was the Chaffee patent purchased by you?

22. Were said process and machinery freely used by all persons employed in rubber manufacture (previous to the extension thereof,) or was said use controlled or attempted to be controlled by you or others by trial, agreement, or a suit?

23. Was any person ever sued for the use thereof by you, if so, when?

24. Was any money or price ever paid to you for the use of the same, prior to the extension thereof?

25. Did Horace H. Day ever use said Chaffee processes and machinery in the manufacture of the articles which he was authorized to make or for the purpose for which he was licensed?

26. Did said Day ever use said Chaffee process and machinery for the purpose for which he was not licensed, or in the manufacture of articles which he was not authorized to make?

27. Under what agreement, if any, and at whose suggestion and for what purpose was the application for the extension of the Chaffee patent made?

28. Who were to act in, and be employed in the procuring the said extension; and how were the expenses incident thereto to be paid?

29. Who were employed and who acted in forcing the same as counsel or otherwise, and in whose behalf and at whose expense?

30. If said agreement was in writing, please annex the same as a copy thereof, and state when it was executed?

31. Was the patent for the improvement of compounding and mixing gum lac or shelaoc with India rubber mentioned in said agreement ever issued?

32. What if any thing was done by you under said agreement?

33. Has said Chaffee executed or offered to execute to you an assignment and fee, a mortgage or lien of security upon the extension of his said patent of August 8, 1836; if yea, where?

34. What connection did Wm. Judson sustain to you or your licensees, and what interest had he in any of your patents at the time said agreement was made, and at the time of the extension of said patent, and during what period has said extension existed?

35. Were any written papers subsequently made between said Judson and said Chaffee respecting said extended patent; if yea, when?

36. If in the preceding answer you have spoken of a written paper executed on the 5th September, 1850, between said Judson and said Chaffee, please state when you first heard of the same; if by letter, please annex the same or a copy thereof, and whether you have assented to or dissented from the same, and to what extent and for what purpose?

37. If in answer to the 36th question, you have spoken of a written paper executed on the 12th of November, 1851, between said Judson and said Chaffee, please state when you first heard of the same; if by letter, please annex the same or a copy thereof, and whether you have assented to or dissented from the same, and to what extent and for what purpose?

38. Have the defendants in this case used the process and machinery claimed to be an infringement upon the Chaffee patent with your knowledge and consent or against your will and permission.

CHARLES T. BRADLEY,

Of Counsel for Defs.

CIRCUIT COURT OF THE UNITED STATES,

RHODE ISLAND DISTRICT.

HORACE H. DAY

VS.

AT LAW.

ISAAC HARTSHORN, *et al.*

Objections to interrogatories in chief, and cross interrogatories to be propounded in the above entitled cause on the part of the Plaintiff, to Charles Goodyear, now said to be in London, in the Kingdom of Great Britain.

First objections to Interrogatories by Defendants to said Goodyear, above filed.

The plaintiff objects to the first, second and third interrogatories in chief as improper and immaterial.

The plaintiff objects to the eleventh interrogatory in chief, and the answer thereto in reference to the nature and character of the licenses, on the ground that they were in writing, and for the same reason to the thirteenth interrogatory and answer.

The plaintiff also objects to the eighteenth, nineteenth, and twenty-second interrogatories and the answers thereto, as the witness should only give facts and agreements, and motives and purposes are improper and immaterial.

The plaintiff also objects to the seventeenth, twenty-fifth, twenty-sixth, thirty-first, thirty-seventh, forty-second, forty-eighth, fiftieth, fifty-second, fifty-fourth, and the answers thereto, as they each require the impression of the witness and for him to answer as to mixed questions of law and fact, and issues on the trial, while he can only be inquired of as to actual facts, sayings and doings and agreements of parties, and also because they are immaterial.

The twenty-sixth interrogatory is leading, and is also objected to for that cause.

Plaintiff objects to the twenty-ninth and thirtieth interrogatories and the answers thereto as asking for hearsay, and are immaterial.

The plaintiff also objects to the thirty-fourth interrogatory and the answer thereto, as leading and immaterial, and asking for oral evidence of what is shown to be in writing, and also the opinion and conclusion of the witness.

The plaintiff objects to the thirty-eighth interrogatory as leading and asking for what witness has heard, and is hearsay, and incompetent and immaterial and improper.

The plaintiff objects to the thirty-ninth interrogatory as leading and improper.

The plaintiff also objects to the fortieth and forty-first as immaterial and leading, to the forty-ninth and the answer thereto, as the matter inquired about is immaterial, and is shown to be in writing.

Secondly.—The Plaintiff propounds to said CHARLES GOODYEAR, the following Cross Interrogatories.

1. Whether you did not during the existence of the original term of the Chaffee patent, make all your contracts and licenses with your licensees in

writing, and was not your whole contract therein expressed—and did the written contracts include all the patents you then owned, except the license to Ely and Crane?

2. Were you at the house of Edwin M. Chaffee, in New Haven, in the evening when Chaffee, L. Candee, Wm. Judson and George Woodman were present, soon after the extension of said patent—if so, give the date?

3. Did you not write to said Chaffee a letter, or letters, between the 12th of November, 1851, and the 1st of March, 1852—and when, if at any time, in which you mentioned and referred to the contract of the 12th of November, 1851—mentioned in the 26th interrogatory in chief?

4. How much, if any thing, were you indebted to Edwin M. Chaffee, on old debts, on the 31st of August, 1850?

5. Have you not taken out a patent in England, for the gum shalac invention, mentioned in your contract with Edwin M. Chaffee, of the 23d of May, 1850—and have you not, also, taken out a patent in England, for his coal tar invention?

6. Have you not, since the 31st of August, 1850, written various letters to Chaffee, in reference to the inventions named in the last cross interrogatory—and asking information and advice of him in reference thereto; and if you have, and he has answered them, will you annex copies of your letters, and the originals of his, in reply on that subject—if you refuse the originals, annex copies of his.

7. Has William Judson been in England since the 1st day of August, 1854, and have you seen him since that time—before you answer this interrogatory, and when, where, and how many times; and have you talked with him about your testimony in this case; and have you seen copies, or what purported to be copies of the interrogatories which you have answered above, or any of them in writing, or any thing in writing, relating to them, or on that subject; or has any thing been read to you—and if so, when and by whom?

8. Have you been told or in any way informed directly or indirectly as to the fact that you was to give your testimony and what would be asked of you and by whom and when and in what manner, if at all?

9. Were there not several judgments against you in the United States, on the 31st of August 1850, and were there not judgments against you within one year before that date and two after that date, and if so in whose favor and for how much, when and where obtained; and have they or any of them been paid and by whom, when and how, and were you not largely indebted to various persons, and if so to whom, in the United States in the years 1850, 1851, 1852, and are you not now so indebted?

10. Have you not drawn drafts on Wm. Judson and others since you have been in England, which have been protested, and if so, who upon, when and for what amount? answer particularly.

11. Did you not before the 31st of August 1850 write a letter and deliver the same to Edwin M. Chaffee, and while the application for an extension was pending and after the 23d day of May, 1850, in which you stated in substance that William Judson was the attorney of Chaffee and was acting as such, in procuring the extension, or words to that effect?

12. Did you not address such a letter as is named in the last Cross-Interrogatory to one of the examiners in the patent office at Washington at the time stated above, and containing the statement, above named in the said last interrogatory?

13. Did you not between the 31st of August, 1850, and the 1st of July, 1853, write a letter or letters to said Chaffee, complaining that Judson had treated you unfairly in procuring the paper of the 5th of September, 1850, or

words to that effect—and did you not state to said Chaffee, at the first interview you had with him after you knew of the paper of September 5th, 1850, that Judson had treated you unfairly and dishonestly, in procuring the paper of the 5th of September and that he had deceived both you and Chaffee, and that he was a knave and it was one of his usual tricks, or words to that effect, and have you not stated the same thing to said Chaffee in the hearing of other persons, at other times since that time, and did you not discharge Chaffee from your employment on account of his having made said paper of the 5th of Sept., 1850?

If you state in answer to the 40th or any other direct interrogatory that these defendants transacting business as Hartshorn & Co., at Providence, Rhode Island, have used the invention machinery and process of said Chaffee, or either of them in their said business at said Providence, since the extension of said Chaffee patent, will you state when, where and under what circumstances such approval was given, which of said defendants were present, and what other persons,—whether such approval was in writing or otherwise, and if otherwise, in what manner or in what language given, and if in writing annex a copy thereof,—and whether any consideration was paid, secured, named or assented to for such approval, by said defendants; and state also when the subject of such approval was first mentioned to you, and by whom, and where, and if by letter annex a copy,—and if you ever had any correspondence with the defendants, Hartshorn & Co. on the subject, annex copies of such correspondence.

The answers of JOHN C. WHEELER to the direct interrogatories contained in the annexed commission, taken the 20th day of January, 1855.

To the first interrogatory he saith:

I was keeper of the Union Hotel in the city of New York; proprietor and owner of the lease, &c.

To the second interrogatory he saith:

I knew Goodyear from a boy up to June 1853. I knew nothing of Chaffee except in 1850, 1851, 1852, and up to June, 1853, when he was frequently at my hotel as a guest of Mr. Goodyear.

To the third interrogatory he saith:

He came with me on the third of November, 1849, and remained till some time in June, 1852: he stayed with me till the day he sailed for Europe; he was absent some of the time, but generally retained his rooms during his absence, and called it his home, and all his connections came here. His family consisted of himself, his wife, a son, and two to three daughters, and he very frequently had persons come to see him, and he almost always paid their bills. His average weekly payments, after examining and referring to my books, were about seventy-five dollars a week. The whole amount paid by Mr. Goodyear during the time he stayed with me was about ten thousand dollars. He paid his bills promptly on presentation, and rarely let them lay over a week, and that was in consequence of his absence. I considered him perfectly good, and lent him money when he asked it, and he always promptly returned it. I regarded him as one of my best customers.

(Signed)

J. C. WHEELER,

one of the firm of J. C. & J. WHEELER.

Sworn and subscribed before me }
this 20th January, 1855. }

J. W. NELSON, Com'r.

The answers of JAMES A. DORR to the direct interrogatories contained in said Commission, taken this 19th January, 1855.

To the first interrogatory he saith :

My name is James A. Dorr. I reside in the city of New York. I am a lawyer.

To the second interrogatory he saith :

My name is subscribed to the agreement in my handwriting as a subscribing witness. It was executed in my presence. The signatures thereto are the genuine handwriting of Charles Goodyear and Edwin M. Chaffee.

To the third interrogatory he saith :

I was acquainted with the pecuniary circumstances of Charles Goodyear at the time said agreement was executed, and during the summer and fall of 1850. He was at that time able to furnish whatever sums of money were requisite to protect and advance the interests of his patents and inventions, and for these purposes he, during the time mentioned, expended considerable sums.

To the fourth interrogatory he saith :

He was living the greater part of the time at the Union Place Hotel in the city of New York, having his family with him ; his family was composed of his wife and five children.

To the fifth interrogatory he saith :

I think from my knowledge of his pecuniary circumstances at that time he could have furnished the means of paying the expenses of the extension of said Chaffee patent to the amount of four or five thousand dollars.

To the sixth interrogatory he saith :

I knew the Chaffee machine in 1844 ; it was put in operation at the end of that year or early in 1845 at Roxbury by Charles Goodyear. I knew of only one machine, it was in a factory building at Roxbury, Mass. It was called the monster machine by reason of its great size and weight.

To the seventh interrogatory he saith :

Charles Goodyear purchased that machine and also the Chaffee patent.

To the eighth interrogatory he saith :

Charles Goodyear obtained a patent for the manufacture of India rubber on or about the 15th of June, 1844, being a patent for the process of curing or improving India Rubber, now commonly called vulcanization ; the India rubber business at that time and after this patent was obtained was in a state of great depression in the vicinity of Boston, as the said Chaffee machine was put into operation after that patent was obtained by Charles Goodyear at Roxbury.

To the ninth interrogatory he saith :

The agreement of May 23d, 1852, was sent to me from London by Charles Goodyear, about fifteen months ago, and it has been ever since, and is now under my control, and has been parted with temporarily to Wm. Judson, for the purposes of this suit, and another suit now being carried on in the Southern District of New York.

To the tenth interrogatory he saith :

I have seen, but cannot say that I know, Wm. F. Ely. I have been informed that he was dead. I have not heard of him for many years.

To the eleventh interrogatory he saith :

I knew Wm. Judson ; he had in the year 1850 an interest of one-eighth in the tariffs or proceeds of the patents of Charles Goodyear.

To the twelfth interrogatory he saith :

During the year 1850, and prior to that year, Wm. Judson was legal counsel of Charles Goodyear, and his licensees engaged in the manufacture of shoes, and he was also trustee of a fund established by Goodyear and his licensees for the protection of Charles Goodyear's patents, and for the advancement of the legal interests of said parties, and their patents and rights concerning the manufacture of India rubber. Wm. Judson was, during 1850, and prior thereto, actively engaged as counsel and as trustee in the matters mentioned, and particularly in conducting suits against Horace H. Day as an infringer, and in obtaining the extension of the Chaffee machine patents,

To the thirteenth interrogatory he saith :

I am well acquainted with the handwriting of Charles Goodyear and Wm. Judson. The signatures to the agreement of August 4th, 1846, are in their own handwritings. I have marked my initials on a copy of the agreement.

To the fourteenth interrogatory he saith :

I have a large interest in the proceeds of the patents of Charles Goodyear, and for more than ten years I have been intimately acquainted with all matters connected with the history and management of Chas. Goodyear's patents, and those in which he was interested.

To the fifteenth interrogatory he saith :

Charles Goodyear had no other source of support than receipts and tariffs from his licensees.

To the sixteenth interrogatory he saith :

They were, I believe, in universal use by Goodyear's licensees in connection with Goodyear's patent and vulcanizing process.

To the seventeenth interrogatory he saith :

They did, by his permission.

To the eighteenth interrogatory he saith :

I never knew or understood that any of Goodyear's licensees had a special authority or written license from Chas. Goodyear to use the Chaffee patent and machinery.

To the nineteenth interrogatory he saith :

Charles Goodyear never has been to my knowledge since I have known him, a manufacturer of India rubber goods for sale, his business has been confined to experiments and selling licenses.

To the twentieth interrogatory, he saith :

No compensation of any kind was ever made to Charles Goodyear by any of his licensees for the use of the Chaffee patent and machinery. If there had been made any such compensation, I do not doubt I should have known it.

To the twenty-first interrogatory, he saith :

I have always understood from Charles Goodyear that his object in making the agreement of May 23d, 1850, with Edwin M. Chaffee, was to acquire the ownership of the extension of the machine patent for the use and benefit of himself and his licensees, using the patent of June 15th, 1844, for vulcanization. I always have understood from him that it was no part of his intention to ask for or receive compensation from any of his licensees for the use of said patent or machinery.

To the twenty-second interrogatory, he saith :

I first heard of the agreement of September 5th, 1850, some time in the autumn of 1850 ; I think in the month of September or October, 1850.

To the twenty-third interrogatory, he saith :

Charles Goodyear knew of the agreement between Judson and Chaffee of September 5th, 1850, soon after it was made, and spoke to me about it, I think in September or October, 1850. He did not altogether approve of the form and manner of the agreement, thinking it would have been better if Chaffee had conveyed the extended patent directly to him, but he acquiesced in the agreement after it was completed, considering it as intended to carry out substantially the agreement of May 23d, 1850, between him and Chaffee, so so far as the extended patent was concerned.

(Signed,)

JAMES A. DORR.

The answers of JAMES A. DORR to the cross interrogatories contained in the annexed commission.

To the first interrogatory, he saith :

I do not know that he possessed any real estate ; he was in the receipt of tariffs from his licensees to a considerable amount, say to the best of my judgment about twenty thousand dollars per annum. He had valuable rights under his patents which he could have sold or raised money on at any moment. I think he would have no difficulty in raising in this way twenty thousand dollars.

To the second interrogatory, he saith :

Charles Goodyear in the year 1844 informed me that a machine existed in Roxbury, Mass., patented by E. M. Chaffee, which he thought might do away with the necessity of using solvents in the manufacturing of vulcanized India rubber. I saw the machine at Roxbury first in the autumn of 1844, and I furnished to Mr. Goodyear the necessary sums of money to enable him to purchase the machine at Roxbury and the Chaffee patent, and to put the machine at Roxbury in operation, so as to test its utility in connection with his vulcanizing process. I advanced for this purpose to Mr. Goodyear in the winter of 1844 and '45, about ten thousand dollars ; I resided in Boston during the time experiments were thus made with the machine by Mr. Goodyear, and visited the factory at Roxbury, and saw the machine almost every day during that winter.

To the third interrogatory he saith :

Isaac Hartshorn, Providence, Rhode Island, manufacturer of India rubber shoes under a patent of Charles Goodyear, taken out, I believe, in 1838, doing a large business. John Haskins, Roxbury, Mass. I do not know personally what goods are manufactured by Mr. Haskins. The Naugatuck India Rubber Company, Naugatuck, Conn., manufacturers of various goods of vulcanized India rubber under O. Goodyear's patents. Connecticut manufacturer of clothing and caps under O. Goodyear's patent for vulcanization. Cutler and Jenckes, Springfield, Mass., manufacturers of India rubber, under O. Goodyear's patent for vulcanization. H. H. Day, New York. I do not know the nature or extent of Day's business in New York in 1844, but was informed that he manufactured India rubber suspenders and braces among other things.

To the fourth interrogatory he saith :

It was in writing, and the papers are, I suppose, in Mr. Judson's possession.

To the fifth interrogatory he saith :

The contracts were in writing. I have seen them, and they are, I suppose, in the possession of Mr. Judson.

To the sixth interrogatory he saith :

I was familiar with Chas. Goodyear's business. I never knew that he ever received any compensation from any of his licensees for the use of the Chaffee patent. I should undoubtedly have known the fact if he ever received any compensation for the use of it.

To the seventh interrogatory he saith :

I have not been actively engaged in the Chaffee litigation as a party thereto, and I have no interest in this suit.

To the eighth interrogatory he saith :

I have as plaintiff with Charles Goodyear and William Judson, filed a complaint in the city of New York as to the remainder of this cross-interrogatory. I cannot answer it better than by annexing a true copy of the Complaint which I have hereto annexed, marked "No. 1."

(Signed)

JAMES A. DORR.

Sworn and subscribed before me
this 19th January, 1855.

J. W. NELSON, Com'r.

The Answer of CHARLES M. KELLER to the questions contained in the annexed Commission, taken this 20th January, 1855.

To the first interrogatory he saith :

My name is Charles M. Keller; I reside in the city of New York; am a counsellor at law.

To the second interrogatory he saith :

I was so employed at that time by Wm. Judson on behalf of the Goodyear interest. I was not employed by Mr. Chaffee. I charged and was paid for my services by Mr. Judson.

To the third interrogatory he saith :

The principal difficulty that I met was in consequence of the objections made that the patent if extended would enure to the benefit of Charles Goodyear.

To the fourth interrogatory he saith :

I had considerable experience in that business, and had been engaged in several instances in procuring extensions. My chief experience was derived from my having been employed as Chief Examiner for upwards of nine years previous, in the Patent Office, which nine years ended in May, 1845, at which time I went into the business of procuring patents, and extensions of patents.

To the fifth interrogatory he saith :

I consider it one of the most difficult cases which could have been presented for the extension of the patent, in view of the nature of the opposition to such extension. I was only present on one occasion of the examination of witnesses, and am not competent to judge of the amount of labor and expense of taking the testimony; but from my knowledge of the testimony filed in the case, from which I had to make my argument, the expense incurred in the prosecution of the application must have been attended with a greater expenditure of money, or rather costs, than any other cause which has come within my knowledge; but from my present knowledge I am not competent to express an opinion as to the value which the patent would have been to Chaffee under the circumstances named in the question.

To the sixth interrogatory he saith :

I do not remember at this distance of time what admissions were made to the Commissioner of Patents by the counsel on either side ; but a question did arise as to the extended patent enuring to the benefit of Charles Goodyear, and I was compelled, either in written or oral argument, to admit this fact, and that presents the chief difficulty in the way of obtaining an extension.

To the seventh interrogatory he saith :

I remember several interviews or conversations in Washington, in relation to the said extension, when Mr. Judson and Mr. Chaffee were present ; and in several of these conversations the matter of the extension enuring to the benefit of Goodyear, if granted, was referred to and either Mr. Chaffee himself or Wm. Judson in his presence, and not contradicted by Mr. Chaffee, said that the fact of the extension enuring to the benefit of Charles Goodyear should not be an objection to the extension, if Mr. Chaffee was satisfied with the compensation which he had or was to receive.

(Signed,)

CHARLES M. KELLER.

The answers of CHARLES M. KELLER, to the Cross Interrogatories in the annexed Commission.

To the first interrogatory he saith :—

It was principally argued in writing, and I signed the argument or arguments ; my impression is, that there were two written arguments—I signed the argument as counsel for Chaffee, the application by the practice of the office, being always filed in the name of the patentee.

To the second interrogatory he saith :

I do not remember distinctly—the arguments will show for themselves ; but my impression is, that I argued the extension either orally or in writing, on the ground that, although the patent when extended, would enure to Goodyear, the grant would benefit Chaffee, on the presumption that he had made arrangements by which he could receive a compensation satisfactory to him. Since that time I have not read over either my notes, or the arguments themselves, and cannot speak definitely as to the precise time.

To the third interrogatory he saith :

I was examined as a witness in the case named in the question, and there testified that I had signed the argument, as counsel for Chaffee ; but, that I so signed formally, and did testify that I did not act as counsel for Chaffee.

To the fourth interrogatory he saith :

I did.

To the fifth interrogatory he saith :

I have not a copy of it.

To the sixth interrogatory he saith :

I have not.

To the seventh interrogatory he saith :

I do not. I examined into that question for the purpose of arguing the motion or extension ; but I have no recollection at the present time, to enable me to answer that question.

To the eighth interrogatory he saith :

I have no opinion upon that subject.

(Signed)

CHARLES M. KELLER.

Sworn and subscribed to before me this 20th day of January, 1855.

J. W. NELSON, *Commissioner.*

The answers of JOHN GREACEN, to the direct Interrogatories, contained in the annexed Commission, taken this 19th day of January, 1855.

To the first interrogatory he saith :

My name is John Greacen, Jr., my place of residence is _____ neck, Westchester county, State of New York. I am engaged in mercantile business in New York city.

To the second interrogatory he saith :

I know William Judson, and have known him intimately since 1848.

To the third interrogatory he saith :

Judson was engaged in the India rubber business, he occupied the store No. 100 Broadway. The business was the sale of India rubber goods, made under Charles Goodyear's patents, there was a sign up, it was "Goodyear's rubber warehouse," that sign is now up in the store No. 98 Broadway.

To the fourth interrogatory he saith :

Mr. Judson moved from No. 100 Broadway to 98 Broadway, some time during the winter of 1848 and 1849, I think in January, 1849.

To the fifth interrogatory he saith :

Mr. Judson was in the store No. 98 Broadway, in the years 1850 and 1851; and I think in the year 1852 the business of the store was the sale of India rubber goods made under Goodyear's patents. Mr. Judson was engaged in matters relating to Goodyear's patents, having almost the entire management of all suits and proceedings commenced with the parties—he was also the owner of an India rubber store in Philadelphia.

To the sixth interrogatory he saith :

Abraham B. Thompson kept Mr. Judson's accounts when he was at 98 Broadway. Large sums of moneys came into my hands for Wm. Judson, for and on account of tariffs paid to him by Charles Goodyear's licensees, and by J. C. Ackerman, trustee of the shoe associates from 1849 to 1841, said moneys were disbursed under Mr. Judson's directions for expenses of suits at Law and other expenses with Goodyear's patents; the accounts were kept by A. B. Thompson in the Cash Book. The Book-Keeper Mr. Thompson, was directed by Mr. Judson, was in the habit of specifying in his entries from time to time the purposes for which the sums were paid. The Cash-Book is now present, on pages No. 18 and 14 of which Wm. P. Buckmaster has written his name. The entries made by A. B. Thompson in this Book began Feby. 1st, 1850, and are continued as late as July 12th, 1851. I have seen him write and know his hand-writing; the pages numbered 13 and 14 in this Book are all in his hand-writing, as are also the pages from 15 to 62 both inclusive.

To the seventh interrogatory he saith :

I never knew Mr. Judson to be engaged or employed as a lawyer in any suit or suits whatever other than those of Goodyear and his licensees.

To the eighth interrogatory he saith :

Mr. Judson's whole time was devoted to the suits and business connected with Goodyear's patents while he was in the store of No. 98 Broadway.

To the ninth interrogatory he saith :

I knew Edwin M. Chaffee in 1850, he was frequently in the store No. 98 Broadway. I had conversations with him respecting the extension of his patent before the extension was obtained. In reply to questions from me, Mr. Chaffee informed me that the extension was to be for the benefit of Goodyear and his licensees.

To the tenth interrogatory he saith :

In 1850 and previously I was one of Charles Goodyear's licensees to use his patented vulcanized process.

To the eleventh interrogatory he saith :

The licensees of Charles Goodyear were almost daily at No. 98 Broadway to see and consult Judson about Goodyear's patents and their interests under them.

To the twelfth interrogatory he saith :

I knew Hiram Hutchinson, he was very often at No. 98 Broadway to see and consult Judson during the Spring and Summer of 1850, and at all times so long as Judson was at 98 Broadway.

To the thirteenth interrogatory he saith :

I have referred as mentioned in my answer to question sixth.

To the fourteenth interrogatory he saith :

I had a factory when Chaffee's machines were used before and after the extension of Chaffee's patent and pending the application for the extension.

To the fifteenth interrogatory he saith :

I consented to, and approved of the application for the extension of the Chaffee patent, because I was to be benefited, as I believed, in my business by such extension, in common with the other licensees of Charles Goodyear.

To the sixteenth interrogatory he saith :

I and other licensees of Charles Goodyear, used, by his permission, the patent and machinery of Edwin M. Chaffee prior to the extension; I have no permission in writing, and think that the other licensees had not any such permission in writing; I did not pay anything for such permission; I have never heard of any one paying him for such permission.

To the seventeenth interrogatory he saith :

Mr. Judson was in 1850, 1851 and 1852 what I consider a wealthy man, worth at least one hundred thousand dollars.

(Signed,)

JOHN GREACEN, JR.

The answers of JOHN GREACEN, Jr.; to the cross interrogatories contained in said Commission.

To the first interrogatory he saith :

Judson occupied the whole of No. 100 Broadway; there was a room in the rear of the second story, where I saw him once or twice. I did not see any law library there, so far as I can recollect, nor law books. I think that there was a desk or table in the room. I do not know whether he did his business there or not.

To the second interrogatory he saith :

Mr. Judson had not any sign whatever with his own name at the time I saw him there, at 100 Broadway, either within or without the store.

To the third interrogatory he saith :

When Judson was at 98 Broadway he had a part of the time an office in common with another person. He used it as an office. He had no sign of any kind whatever. He had some law books—not many.

To the fourth interrogatory he saith :

I did not keep any account except those of the store in 98 Broadway. I

acted as Mr. Judson's banker—all his funds passed through my hands, and I of course, kept an account with him.

(Signed,)

JOHN GREEN, Jr.

Subscribed before me this }
20th January, 1855. }
J. W. NELSON, Com'r.

The answers of HUBART SMALES to the interrogatories contained in the annexed Commission, taken the 22d January, 1855.

To the first direct interrogatory he saith:

My age is 48 years; I reside at No, 16 Union Place, New York, and am a Counsellor at law.

To the second interrogatory he saith:

I was employed to oppose the application of Chaffee for an extension of his patent. I was first employed about the 17th of June, 1850, by Samuel T. Armstrong, Samuel O. Bishop and J. S. Tyler, for whom I drew up protests against the extension of Chaffee's patent, and I think they were sent to the Commissioner of Patents. In the July following I drew a protest for Henry Newell. I was not employed by Day to draw up any protest, and from entries in my register I think the first time I saw Mr. Day was on the 18th of July, when, it appeared that I called at his store and had a consultation as to taking testimony, before whom I don't recollect. Mr. Day presented a remonstrance through Mr. Gifford, who was his counsel, with whom I had nothing to do. I can't say that Day ever expressly employed me, but I considered I was acting for him and others.

To the third interrogatory he saith:

So far as I knew or acted at first, before I commenced taking testimony, I had most to do with Mr. Armstrong. During the taking of testimony Mr. Day was very active. I was supplied with materials for the examination of the witnesses by Mr. Day, Mr. Armstrong, Mr. Hartshorn and a gentleman belonging to the Boston Belting Co. The three first rendered all the assistance in their power. I did not see much of the last gentleman. I consider that Mr. Day and Mr. Hartshorn were equally active in the matter. Mr. Hartshorn came on from Providence two or three times, and was very active. I think Mr. Day, from his residing in New York, devoted more time than Mr. Hartshorn.

To the 4th interrogatory he saith:

A protest of which I believe the paper marked B is a correct copy. Neither Mr. Day nor Mr. Hartshorn was present to my recollection, so far as I recollect the party from whom I obtained a knowledge of the facts stated in that paper, was Mr. Samuel T. Armstrong. I do not think Mr. Newell was present.

To the 5th interrogatory he saith:

I think the petition of Newell was prepared without Day's knowledge. I think it was prepared at the request of Armstrong, Hartshorn and others whom I have mentioned in the 2d interrogatory; I believe I had not any consultation with Mr. Day at the time that petition was prepared, I don't know that he knew about it until after it was drawn up and signed.

To the 6th interrogatory he saith:!

The examination of witnesses that I attended was taken under the remon-

strance of Newell, Mr. Day and Mr. Hartshorn and others who were active in the opposition, directed it to be sent on to Washington.

To the 7th interrogatory he saith:

I do not recollect to whom I gave it.

To the 8th interrogatory he saith:

I saw him in Mr. Day's store, but whether he was a clerk of Day or what his business was then I did not and do not know.

To the 9th interrogatory he saith:

Mr. Day was very frequently in attendance and for considerable periods during the time I was engaged in taking testimony in opposition to the extension, I can't say how often he was in attendance, he was so during the greater part of the examination, he suggested questions to me to put to the witnesses, but did not examine them himself, he may have put occasionally a question to the witnesses, but I have no recollection whether he did so, or not. I conducted all the examination of the witnesses except Day, Mr. Wm. Judson was the counsel for Mr. Chaffee. I do not recollect Mr. Keller appearing as counsel at that examination, I think he did not, I knew that he acted as counsel for the extension but not at that examination.

To the 10th interrogatory he saith:

I did attend the taking of testimony in Boston, I left New York on the evening of Thursday about the middle of August by the Fall River Boat at 4 or 5 o'clock, P.M. and arrived in Boston the following morning. I left Boston in the Fall River train of cars about half past four of the afternoon of the following Saturday. Mr. Judson did not go on to Boston with me in the same train, I found him in Boston on my arrival there; being confined to my bed by sickness and not being able to state the day of the month only by referring to my register which is not present, I cannot state it nearer than the middle of August.

To the 11th interrogatory he saith:

Mr. Judson did not return to New York in the same train with me, I left him in Boston and do not know when he returned.

To the 12th interrogatory he saith:

I have referred to the paper annexed marked B and to an extract from my register sent to me during the day, I requested the extract to contain the date of my leaving New York for Boston and of my return, but those dates do not appear in the memorandum.

To the 13th interrogatory he saith:

I knew or was informed by him that he did give a deposition, but whether the paper marked O is a copy of it I am unable to say. As to the best of my recollection I never read it or had it in my possession, I was not present when he put in said deposition before the commissioner, nor of his cross-examination, to the best of my belief I never had a copy of the deposition in my possession.

To the fourteenth interrogatory he saith:

I have no recollection of Day having made the statement contained in that paper in my presence; his deposition was written out by himself, without any consultation with me, and handed by him to the commissioner.

(Signed)

H. SMALES.

Sworn and subscribed before me, }
this 22d January, 1865.

J. W. NELSON, Com'r.

Answer of GEORGE J. S. THOMPSON to the Direct Interrogatories propounded in the annexed commission, taken this 18th of January.

To the first interrogatory he saith :

My name is George J. S. Thompson, aged 35 years; reside in the city of New York, and am engaged in the mercantile business. Was, in 1845 and 1846, a portion of the time, salesman at Goodyear's rubber store, 100 Broadway, and the balance of the time was bookkeeper and cashier at the Franklin House, 195 Broadway, in said city. I knew Wm. Judson at that time, and knew him in 1844, and have known him intimately ever since.

To the second interrogatory he saith :

Wm. Judson was engaged in 1845 and in 1846 in the India rubber patents of Charles Goodyear, and the business connected therewith, and it occupied much of his time and attention; my means of knowledge are from daily association and acquaintance with him.

To the third interrogatory he saith :

Judson had no other business to my knowledge since 1846, except the patent business of Charles Goodyear, and mercantile business connected with said patents. I knew him intimately, at that time, and ever since; he was not employed as attorney and counsellor in any suits other than the Goodyear patent business. He had no sign up as of a lawyer, and never acted as such, save in the rubber patents.

To the 4th interrogatory he saith :

I was in the employment of Wm. Judson in 1848; was not in his employ after the 1st of January, 1849, but was in his employ up to the 1st of January, 1849; his place of business was 100 Broadway, in the city of New York; he leased the premises; no one was interested with him in the business; the business was exclusively the selling of goods manufactured by Goodyear's licensees, under his vulcanized rubber patent; the sign on the store was, "Goodyear's rubber warehouse;" my means of knowledge as to the above facts were from my intimate acquaintance with him, and also from being engaged in said store. I am enabled to fix the date from entries made by myself in his book of accounts kept by me at that time, commencing at page No. 45, said book is marked with my signature across the top of said page 45.

[The said book is marked B by the commissioner, and with his signature on the cover.]

To the fifth interrogatory he saith :

Wm. Judson was interested in the India rubber business in Philadelphia, and had a store there as early as the year 1847, and has always had the store there since; he has had no partner in the business there, and the store was devoted to the sale of Goodyear's vulcanized rubber fabrics, exclusively; this store was, and is, designated "Goodyear's rubber warehouse," and such was and is the sign over the door of said store.

To the sixth interrogatory he saith :

I left the employment of Wm. Judson on the 1st of January, 1849, and Abraham B. Thompson was his clerk at and after that time for the space of at least two years. I am enabled to state the latter part from reference to the book of accounts before referred to, containing original entries in the handwriting of Abram B. Thompson, during that period of time. I was engaged by Wm. Judson in 1850, to negotiate the purchase of the lease and the furniture

and stock of the Franklin House, in the city of New York, from John P. Treadwell. I purchased said lease and furniture and stock in said house for Wm. Judson, in his name, for the sum of eighteen thousand five hundred dollars (\$18,500) or thereabouts, and immediately thereafter, under his directions, converted the building into stores and offices, at an expense of twenty-five thousand dollars or more, which expenses were paid by said Judson at and during the progress of the work—for said services I was paid by Wm. Judson the sum of six thousand dollars, and from said purchase said Judson has realized, since said alterations were completed, an annual net profit of about eighteen thousand dollars per annum; a portion of said leases expire in 1858, the balance in 1861.

To the seventh interrogatory he saith:

I knew Horace H. Day in 1846; he frequently called upon Wm. Judson at the Franklin House in the city of New York: the subject of their interviews was the settlement of the suits then pending between said Day and Charles Goodyear for infringements of his patents by said Day.

To the eighth interrogatory he saith:

Wm. Judson in the years 1850, 1851, and 1852, was responsible for at least one hundred and fifty thousand dollars, over and above any indebtedness.

G. J. THOMPSON.

The answers of the said GEORGE J. S. THOMPSON, to the Cross Interrogatories, contained in the annexed commission.

To the first interrogatory he saith:

William Judson in the years 1848 and 1849, had no sign up with his name on to my knowledge, he had an office or a counting room, in the store No. 100 Broadway, in 1848 and 1849, he had a few law books in said office, I believe; and afterwards at No. 98 Broadway, he had a desk in Mr. J. Greacen, Jr.'s, office which was subsequently partitioned off. J. Greacen, Jr. was a lessee under Charles Goodyear and occupied store No. 98 Broadway, afterwards in the latter part of 1851, or early in 1852, Wm. Judson moved to the Franklin Buildings, 195 and 197 Broadway, and had a sign up with the name William Judson, thereon.

To the second interrogatory he saith:

I am not aware of his acting as attorney for any person other than Charles Goodyear, during the years 1846 and 1847; and after that time I am positive he has not transacted any law business except for Charles Goodyear and his associates, in connection with the Goodyear patent, and have frequently known him to employ lawyers to attend to his own cases.

To the third interrogatory he saith:

Wm. Judson has had property to a large amount, which could be taken on execution since 1846. He was the sole capitalist in the store 100 Broadway, in 1846, and in the store at Philadelphia in 1847, and ever since that time.

G. J. THOMPSON.

Sworn and subscribed before me this 18th day of January, 1855.
J. W. NELSON, *Commissioner*.

The answers of NATHANIEL JARVIS, Jr., to the Direct Interrogatories contained in the annexed commission taken this 19th of January, 1855.

To the first interrogatory he saith:

I reside in the city of New York; am an attorney at law; am twenty-six years of age and upwards.

To the second interrogatory he saith:

I knew Wm. Judson during the years 1849, 1850 and 1851, he was engaged in those years in the India rubber business at No. 100 Broadway, in the city of New York, he moved to 98 Broadway, and had an office in the back part of the store for the transaction of business relating to the patents of Charles Goodyear, he had no sign up, and was not in those days engaged in the practice of law in any other suits than those relating to Charles Goodyear.

To the third interrogatory he saith:

He had no law office, and was not a practising attorney or counsellor at that time, and I derive my knowledge from my acquaintance with him. I was in his store office very often during those years, and was present when matters relating to his business were transacted and assisted therein.

NATHANIEL JARVIS, Jr.

Answer of NATHANIEL JARVIS, Jr., to the Cross Interrogatories contained in said commission.

To the first interrogatory he saith:

I knew he was not in any suit in which he was not personally interested or in the suits of Charles Goodyear. I acted as attorney in 1850 and 1851 and afterwards in suits in which Mr. Judson was personally interested, not connected with Goodyear's patents, and was paid by him.

NATH'L JARVIS, JR.

Sworn and subscribed before me, }
this 19th January, 1855.

J. W. NELSON, Com'r.

The answer of HENRY E. CLARK to the Direct Interrogatories in said Commission, taken this 19th January, 1855.

To the first interrogatory he saith:

My age is thirty-six. I am a merchant doing business at 158 Broadway in the city of New York.

To the second interrogatory he saith:

I am acquainted with William Judson. I first knew him in 1846 or 1847 at the Franklin House in the city of New York, but have been intimate with him since 1848.

To the third interrogatory he saith:

He was engaged in the Rubber business, and in the management of the Pat-

ents of Charles Goodyear and suits and proceedings connected therewith, and to which he has devoted his whole time and attention since my intimate acquaintance with him.

To the fourth interrogatory he saith:

He has not been a practising Attorney and Counsellor at Law since I have known him intimately (since 1848.) He has acted as attorney, counsellor, and manager in all matters connected with Goodyear's India Rubber patents, but in no other matters. I know this from the fact that I was very intimate with him, saw him almost daily, and knew all about his affairs.

To the fifth interrogatory he saith:

Mr. Judson had a store in Broadway in the city of New York in 1848, and the sign was "Goodyear's Rubber Warehouse," and the business there transacted was the sale of Vulcanized India Rubber goods, manufactured by the licensees of Charles Goodyear under his patents. I was frequently in the store. Mr. Judson moved from said store to 98 Broadway, and his business there was that of the management of the patents of Charles Goodyear and the suits connected therewith.

To the sixth interrogatory he saith:

Wm. Judson was in 1880 worth in my best judgment over one hundred thousand dollars over and above any indebtedness, and his property has been largely increased since that time. I have been very well acquainted with Mr. Judson's affairs since 1848, and have always considered him perfectly responsible for all his engagements, and I am perfectly familiar with his affairs at the present time.

HENRY E. CLARK.

The answers of the said HENRY E. CLARK to the Cross-Interrogatories in said commission contained.

To the first interrogatory he saith:

Wm. Judson has not been engaged in suits as Attorney and Counsellor at Law since I have known him intimately, save in suits connected with the patents of Charles Goodyear.

To the second interrogatory he saith:

Mr. Judson was an Attorney at Law, but abandoned the profession previous to my intimate acquaintance with him, (which commenced in the year 1848,) and devoted himself exclusively to the management of the patents of Charles Goodyear, and the suits connected therewith, under agreements with Charles Goodyear and his licensees for that purpose, and his own interest under said patents.

To the third interrogatory he saith:

I do not know in reference to the years 1846 and 1847, but since my intimate acquaintance with him (since 1848) I do know that Mr. Judson has not been engaged as attorney in any suits save those connected with Charles Goodyear's India Rubber business and patents. I know that Mr. Judson has, since 1848, employed attorneys to conduct his own private suits, and I should have been happy to have employed and paid him as attorney in various suits connected with my mercantile business, and should have so employed him had I not known that he had abandoned the profession, save in the prosecution of suits connected with the patents of Charles Goodyear.

To the fourth interrogatory he saith:

It has been generally understood since I have known Mr. Judson intimately,

(since 1846,) that he has had visible property, and that to a considerable amount. I do not know as to his property in 1846 and 1847, but I do know of his having had a considerable amount of property in 1848 at 100 Broadway, and also a place of business and stock of India Rubber goods in Philadelphia, since which time he has continued the business in Philadelphia. Mr. Judson, in the years 1850, 1851 and 1852, owned the lease of store No. 100 Broadway, in the city of New York. And I know as early as 1849 or 1850 that he was interested in the Metallic India Rubber Company, manufacturing and doing business in the city of New York, and from 1850 or 1851 he has been the owner of leases of property formerly known as the Franklin House in the city of New York, from which he has derived a very large yearly income.

HENRY E. CLARK.

Sworn and subscribed before me,
this 19th January, 1855.

J. W. NICHOLS, Clerk.

The answers of WILLIAM P. BUCKMASTER to the direct interrogatories contained in the annexed commission, taken this 20th January, 1855.

To the first interrogatory he saith:

I am 31 years of age. I reside in Brooklyn, and am President of the Good-year Rubber Packing Company.

To the second interrogatory he saith:

I was.

To the third interrogatory he saith:

I did.

To the fourth interrogatory he saith:

I was salesman in the city of New York, at 98 Broadway, at Mr. Greacen's store. Mr. Judson's place of business was in that store, and he continued there till 1852, when he moved to the Franklin Buildings. He was in the Rubber business.

To the fifth interrogatory he saith:

Mr. Judson had no other business besides the India Rubber business, except attending to the India Rubber patent suits of Charles Goodyear and his licensees. It occupied his whole time. He had a store in Philadelphia.

To the sixth interrogatory he saith:

He was not. He had no sign up, neither did he do any other law business than attend to the India Rubber suits of Charles Goodyear and his licensees.

To the seventh interrogatory he saith:

They were in the habit of meeting frequently; some of them were in every day.

To the eighth interrogatory he saith:

I have seen Chaffee in the store frequently, conversing with Mr. Judson and the licensees of Charles Goodyear about the time his patent was extended, previous to the extension and afterwards.

To the ninth interrogatory he saith:

I knew Mr. Woodman from his coming to the store. Saw him in the store in August, 1850, and paid him one hundred dollars on Mr. Judson's account, having previously received instructions from Mr. Judson to get a check from Mr. Greacen and pay Woodman that amount. Woodman said he was going to Washington for the Goodyear party to defeat Day.

To the tenth interrogatory he saith:

I paid Chaffee fifteen dollars about the same time on Mr. Judson's account, and with the same instructions from Mr. Judson how to have it charged. I think Mr. Judson had gone to Washington.

To the eleventh interrogatory he saith:

I paid Chaffee on the 28d of August, 1850, fifteen dollars on Mr. Judson's account, with previous instructions from Mr. Judson to pay that amount and have it charged to the trust fund. The payment was made at 98 Broadway. I paid Woodman one hundred dollars on the 28d or 24th of August, 1850, at the same store, on Mr. Judson's account, with previous instructions from Mr. Judson to see it was charged to the trust fund, it being his invariable habit, when the book-keeper or myself paid any money to him or by his directions, to say how it must be charged. I recollect Chaffee asking for money, saying that Mr. Judson told him to do so. Woodman was in two or three times before he received the money. I gave him Mr. Greacen's check. He wanted to know where the Bank was. I told him I would send and draw it. While the boy was gone to the Bank, Woodman told me he was going to Washington for the Goodyear party to defeat Day. I state these facts from the books then kept at the store and from recollection.

WM. P. BUCKMASTER.

The answers of WILLIAM P. BUCKMASTER to the cross-interrogatories in said commission.

To the first interrogatory he saith:

I know the only law business he had any thing to do with since I have been acquainted with him has been the Rubber patent business for Goodyear and his licensees.

To the second interrogatory he saith:

I am only employed by the Goodyear Rubber Packing Company, in which Mr. Judson is interested, and am interested in the business.

To the third interrogatory he saith:

I am certain it was on the 28d or 24th day of August, 1850, that I paid Woodman one hundred dollars. The hour of the day or the day of the week I cannot state. It was paid by direction of Mr. Judson, with instructions from him to have it charged to the trust fund. It was paid in a check advanced by John Greacen, Jr., on the Bank of New York. Woodman not knowing where the Bank was, I offered to have it drawn. He handed the check back to me, and I sent the boy with the check to the Bank. On his return the money was given to Woodman by me in the presence of the boy who brought it, and paid out of Mr. Judson's funds in Mr. Greacen's hands, mostly derived from the shoe associates and the other licensees of Goodyear.

To the fourth interrogatory he saith:

I can only state that I paid Chaffee on the 28d of August, 1850. Chaffee said that Judson had told him to get some money at the store. I paid him fifteen dollars. He was paid from money in the store on Mr. Judson's account, who derived his funds as before stated, and paid by Mr. Judson's directions, with instructions from Mr. Judson to have it charged to trust fund.

To the fifth interrogatory he saith:

I testified in June last in this city.

To the sixth interrogatory he saith:

I referred to two books in court when I testified in that case: one a receipt book, the other a cash book. Both belonged to Mr. Judson. The cash book

was kept by Abraham B. Thompson, who was employed by Mr. Gressen and Mr. Judson. He is now in California. I have written my name at the top of pages 13 and 14 of the cash book. All the entries in those pages, and from page 15 to 62, are in the handwriting of Abraham B. Thompson. I have seen him write, and know his handwriting. The books are now in the possession of William Judson, and they were in court when I testified in the cause mentioned in the question.

To the seventh interrogatory he saith:

I am not aware of any difference between my statements now and then.

WM. P. BUCKMASTER.

Sworn and subscribed before me, this }
20th January, 1855.

J. W. NELSON, Com'r.

UNITED STATES OF AMERICA.

RHODE ISLAND DISTRICT, ss.

CLERK'S OFFICE CIRCUIT COURT,
At Providence, February 8, 1855.

I, Henry Pitman, Clerk of said Court for said District, do hereby certify that the above and foregoing thirty-seven pages contain a true copy of the originals now on file in this office in the case at law, Horace H. Day vs. Isaac Hartshorn et al, duly examined and compared.

In testimony whereof I have hereunto set the seal of said Court and my hand on the day and year above written.

[L. S.]

HENRY PITMAN, Clerk.

IN THE CIRCUIT COURT OF THE UNITED STATES,

FOR THE DISTRICT OF RHODE ISLAND.

HORACE H. DAY,

AND

ISAAC HARTSHORN, and others.

} In Law.

Interrogatories to be propounded in the above entitled cause, on the part of the defendants to CHARLES GOODYEAR, now in London, in the Kingdom of Great Britain.

1. Who is the original and first inventor of the process of manufacturing, what is generally called vulcanized rubber, for which a patent was issued to you on the 15th of June, A. D. 1844, and re-issued on the 25th day of December, A. D. 1849?

2. Did you at any time engage in experimenting in the manufacture of India rubber goods, and in experimenting on India rubber generally; if so, when did you commence such experiments, and for how long did you continue? and if you say in answer to the last interrogatory that you invented vulcanized India rubber, state about what time you perfected that invention?

3. Before and at the time when you so perfected the invention of vulcanized India rubber, what means or process, had been or were used to dissolve or prepare India rubber, so as to adapt it for manufacturing purposes? If you state that solvents were used, state what solvents, and how in your own experiments you dissolved India rubber.

4. Do you know Edwin M. Chaffee, of Providence, Rhode Island? If so, when did you become acquainted with him, what was then his business, and where did he then reside?

5. Did you learn that he had invented an improvement in the manufacture of India rubber, for which he obtained a patent, dated the 31st day of August, A. D. 1886? if so, when did you first get that information, and did you see or know of the process or machinery of said Chaffee, being used substantially as he claimed the same under his patent? If so—when, where, and by whom were said process and machinery—or was either of them so used? name or describe all the persons so using the same.

6. Did you at any time purchase the aforesaid patent of said Chaffee, or any machinery made under the same, or substantially conformable to his invention? If so—when, where, and for what consideration, and from whom did you so purchase said patent and machinery, or either, and which of them—and state whether any, or what writings were executed in connection with said purchase, and where they are?

7. What did you do with the machinery, if any mentioned in your answer to the last preceding interrogatory, and where is it now?

8. At the time you purchased said patent and machinery, or either of them (if at all) what was the condition of the India rubber manufacture trade, or business in the United States, and the prospect in relation thereto for the future? What persons or companies were engaged in such manufacture, trade, or business at the time of such purchase.

9. Was the consideration which you gave on the purchase of said Chaffee's patent and machinery, or either of them, all that it was worth; state as to each, and state such reasons known to you as existed, which made such consideration adequate.

10. State what was the utility in value of said Chaffee's improvement or patent; first, a part and independent from your improvement and patent for vulcanized India rubber; and, second, in connection with and for the purpose of carrying out from your said improvement and invention.

11. If you say that you purchased said Chaffee's aforesaid patent, state for what purpose you made said purchase, and for whose use and benefit, and whether it was any part of your intention to, or you did ask or receive compensation from any person or company then, or afterwards, for the license or permission to use the said Chaffee's improvement or patent—state, also, whether any license ever was, to your knowledge, or belief, given by you, or any person acting for you, to any person or company, to use said Chaffee's improvement or patent.

12. What persons or companies, if any, before the 23d day of May, A. D. 1850, had any license or permission from or under you, verbal or written, to use your aforesaid improvement and invention of vulcanized India rubber?

13. Did any or all of such persons or companies, on or before the said 23d day of May, A. D. 1850, use the said Chaffee's aforesaid process, machinery or patent; and, if so, did they use the same with, or without your license, permission, or consent? If by license, permission or consent, was the same in writing; was it a specific license, permission or consent, to use said Chaffee's improvement or patent, was any compensation asked, reserved or received by or for you for such license, permission or consent, specifically? If there were no such license, permission or consent, as to the said Chaffee improvement and

patent, in what manner, or by what right or from what capacity, or relation, if any, did the persons or companies mentioned in your last answer, obtain a right to use the said Chaffee's aforesaid improvement and patent, after you had purchased the same?

14. After you had purchased Chaffee's aforesaid patent, did any person or persons, company or companies, use the machinery, process or invention of said Chaffee's, and the said patent, or either of them, without any license, permission or consent from you, or any one acting for you? name such as so used the same, and state whether you or the said Chaffee, to your knowledge, ever objected to such use by said person or persons, company or companies, or ever required or requested them, or either of them, to obtain license or permission from any one to use said process, machinery, patent, or either of them; and state, also, whether any suit, or proceeding at law, or in equity, was ever commenced to prevent or obtain damages for any such use or abuse mentioned—and, in answering this question, extend such answer to the day of your examination under these interrogatories.

15. After you had purchased said Chaffee's patent, as aforesaid, did you take any steps towards introducing the use of the process and machinery aforesaid, under said Chaffee's patent, in connection with your own patent, for vulcanizing India rubber—if so, state what were the steps and measures you adopted, and their result, and when they were taken or adopted:

16. Did you at any time purchase, or agree to purchase, from said Chaffee the right, title, or interest he had to any extension that might be obtained of his aforesaid patent? If yes—when, where, and for what consideration did you so purchase the same? Was the agreement wholly in writing, or partly written, and partly verbal? If wholly in writing, state when, where, and in whose presence the writing was executed, and what became of it afterwards—where it is at the date of your examination, and by whom it was drawn?

17. If you say that said Chaffee executed any written agreement to sell the aforesaid right of extension, of his said patent to you, state, whether he or you ever made any, and if any, what default in not complying with such agreement, or any part thereof? Was such agreement ever broken by him or you? State as to each separately. Was it ever rescinded, annulled, abandoned, or avoided in any way? Did you in any manner, or at any time, do any act to forfeit or lose any right under said agreement? Answer each question contained in the interrogatory, as if it stood alone, and were a separate interrogatory.

18. If you state that you purchased from said Chaffee, his aforesaid right to an extension, state for what purpose, and for whose benefit and use you did so, and whether your design in doing so, as you shall state it was known to said Chaffee, and when and how he became aware of it, if he did become so.

19. What measures did you take alone, or in conjunction with any other person or persons, to procure such extension—where, by whom, and for whose benefit was such extension applied for? For what objects, or purposes, was the same applied for? Did said Chaffee know that such were the objects and purposes? If so—when, and how did he obtain that knowledge?

20. Do you know William Judson, of the city of New York? did he take any part in procuring the aforesaid extension? If so—what part did he take, in what capacity or capacities, and for whom, and for whose benefit, and by or under whose employment (if he was employed) did he act in said proceeding? Did said Chaffee know in what capacity or capacities, and for whose benefit, and under whose employment said Judson so acted? if so—when, and how did said Chaffee obtain such knowledge?

21. Was such extension obtained? if so, when, where, how, and from whom did you first learn that it had been obtained?

22. Did said Chaffee act or take any part in procuring said extension? If so, what did he do therein, and for whom did he act, and for whose benefit,

and for what purposes? State any and every conversation you had with him (if any) in regard to such proceeding for said extension, and for whose benefit the same was to be obtained, and the connection of said Chaffee therewith, and the interest he had, or was to have therein when obtained.

23. Who paid the expenses of procuring such extension? was any agreement ever made as to who should pay them, or how they should be paid? Was there any understanding as to such payment of said expenses? between whom (if it existed) was such agreement or understanding? When and where was it made, or assented to? Did said Chaffee know of it? When and how if at all did he obtain that knowledge? under what circumstances was such agreement, or understanding made or adopted?

24. What part did you personally take (if any) in procuring such extension?

25. When such extension was obtained, was the agreement (if any) made by you with said Chaffee, by which you purchased his right to the extension of his patent aforesaid, subsisting and in force or otherwise?

If you say it was subsisting and in force, state whether said Chaffee at any time stated or alleged to you, or in any way caused to be communicated to you that he treated or regarded said agreement last above mentioned, as annulled for any cause. State what Chaffee ever said to you if any thing on the subject.

26. Was William Judson attorney, or counsel for Chaffee in said extension proceeding?

27. After the said extension was obtained, did said Chaffee ever execute or offer to execute, any transfer to you of the extension of his said patent?

28. Did you see, or receive any communication from said Chaffee between the 30th day of August, A. D. 1856, and the 10th day of September, A. D. 1850—if so, where did you see him, and what communications did he make to you (if any), did he send you any letter—if so, when and where is the letter?

29. Do you know whether or not, William Judson and said Chaffee had any interview, either in the city of New York, or in New Haven, Conn., between the 30th day of August A. D. 1856, and the 5th of September, A. D. 1850, in regard to the aforesaid extension, or any transfer or disposition to be made thereof? Do you know what occurred at such interview? Did you ever hear what occurred at any such interview—if so, when, how and from whom, did you receive the information, and what was the information? state fully.

30. Did you at any time, hear, or know, that on the 5th day of September, A. D. 1850, said Chaffee and Judson executed at New Haven, an instrument in writing, in relation to the extension, aforesaid—if so, when, where, how and from whom did you first get information of that fact—if by letter, state where the letter is. Do you know what occurred, when such instrument was executed? Did you ever hear what occurred at that time—if so, when and from whom did you first hear it, and what did you hear on that subject?

31. Was the said instrument of September 5th, 1850, ever shown to you, or any copy thereof—if so, when for the first time, and by whom, did you immediately adopt, ratify, or approve of said instrument, or object thereto—and if you ever ratified the same, when did you do so, for what reasons? state fully:

32. Did said Chaffee ever speak to you about said instrument of September 5th, 1850—and if so, when for the first time? State all that he ever said to you about it, particularizing the dates and places of such conversation. Did he ever tell you of any of the circumstances, conversations, or negotiations leading to, or attending the execution of said instrument (if any there were), and if so, what did he say on that subject? Did he ever say to you any thing as to what was to be the construction, or effect of said instrument, or as to whether it was or was not legal or valid—if so, when did he first speak to you on that subject, and what did he say?

33. When you last saw said instrument of September 5th, 1850, in whose possession was it?

34. After said extension was obtained, did your licensees have the use and benefit of it—if so, in what way did they derive the right to such use and benefit; did you, or any person in your behalf, execute any written, or give any verbal license, or permission, to any person or persons, or company to use the said extension; or did you, or any person in your behalf, receive any compensation in any manner, for any license, or permission to use, or have the benefit of such extension, was the same, or the invention, process and machinery aforesaid of said Chaffee, or was either of them used after such extension by any person or persons, or company, not in any way authorized so to use the same—if so, was either of said persons, or companies, in any way to your knowledge, or at any time, notified not so to use the same, or requested, or required to obtain a license or permission to use the same; or prosecuted in any manner, either to prohibit such use, or attain damages for any such use—and was any application, or request ever made by any person, to any individual or companies, to pay, or give any compensation, consideration, or reward for any past, present, or future use of the extension, invention, machinery, and process aforesaid, or either of them?

35. Between the 5th day of September 1850, and the time when you left New York, for Europe (the date of which incident please mention), did you see said Chaffee—if so, was it frequently or otherwise, about how often, and where did you see him, and when you saw him, did you converse with him?

36. Did you ever learn, that on the 12th day of November, 1851, said Chaffee, and the said Judson, executed another instrument in writing, in regard to said extension—if so, when, where, and from whom did you learn that fact; was that instrument executed by your consent, or authority; did you ever at any time, authorize, assent to, or ratify the same?

37. Did you at any time, or in any manner, authorize said Judson or Chaffee to do any thing by which to impair, alter, or annul the agreement between said Chaffee and you, to transfer to you the extension of said Chaffee's aforesaid patent?

38. Do you know, or have you heard that said Judson used at any time, any threat, or made any misstatement, or practised any deception or fraud to procure from said Chaffee the instrument of the 5th September, 1850; and if you so heard, when and how did you first receive such information, and what was the information you received?

39. Did said Chaffee at any time, or in any manner, inform you that he wished, or intended to annul, or in any wise avoid the said instrument of September 5th 1850, or apply to you to have him paid, or to pay him any amount due to him under such instrument, or complain to you that said Judson had in any way violated the same?

40. Did you know that the defendants in this suit, after such extension, used in this business the aforesaid invention, machinery and process of the said Chaffee or either of them—if so, did you ever object to such use by them, or did you approve thereof, and do you now object to or approve of such use as made by them?

41. Was this suit in any manner authorized by you?

42. Who is the owner of the extension aforesaid, or of the benefit and advantage thereof?

43. Did you at any time in September, 1850, receive any letter from said Chaffee in relation to the extension aforesaid—if so, when did you receive it, what did you do with it, and where is it now?

44. Was said Chaffee at any time in your employment—if so, in what capacity, during what periods, and when and for what reason did his employment under you cease?

45. Before the extension aforesaid was obtained, did you advance to said Chaffee any money—if so, when and what amount, has the same been repaid—If so, when was it repaid?

46. Did said Chaffee at any time, or in any manner, request you to prohibit the use by any person or persons, or company, of his aforesaid invention, machinery and process, or either of them; or request you to give any license, or permission to use the same, or to require any person or persons, or company, to obtain any license, or permission for such use, or to give any compensation, or request you to commence any suit or proceeding for such use?

47. If you have said in answer to any of the preceding interrogatories, that the said Judson was attorney, counsellor, agent and trustee, or either for you; state whether in what he did in such capacities, or in either of them, he acted under any specific directions, or instructions from you, or according to his own discretion and judgment; and state whether you confided in his ability and intention so to act for your benefit?

48. Did said Judson at any time, or in any manner, use the extension aforesaid, or any instrument executed in relation thereto, to promote his private benefit, or advantage, except as one of the persons interested in your patent—or did he use the same honestly and faithfully, as trustee, and for the purposes for which as trustee, he received a transfer of said extension?

49. At the time said extension was obtained, what interest had said Judson in your patents, or patent rights?

50. Was said Judson ever to your knowledge, information, or belief—attorney or counsellor, for said Chaffee, in any suit or proceeding?

51. After said Judson had obtained an interest in your patent, did he practise as an attorney or counsellor at law—if so, did he so practise in any of the suits growing out of your patents and patent rights, and did he so practise in any other suits except such as grew out of or were connected with said patents and patent rights?

52. Do you know of any right, title, or interest, that said Chaffee had, or owned in the extension aforesaid, when it was obtained—if so, what was it?

53. When said Chaffee made with you (if at all) the agreement to transfer to you the extension of his aforesaid patent, when obtained, what was the condition as to solvency or insolvency, what was such condition on the 23d of May, 1886, and on the 31st of August, 1886, and for two years subsequent to the last mentioned date?

54. So far as you have any knowledge, information, or belief, to whom does the extension aforesaid belong, by whom is it properly held, and to whose use is it held?

55. Do you know, or have you heard of any other matter or thing to the benefit or advantage of the defendants, which you have not stated in any answer to the preceding interrogatories—if so, state the same, particularizing what you know, and what you have been informed, and as to the information; state when, where, how and from whom, or what source it was obtained?

DEPOSITION OF H. H. DAY, FILED BY DEFENDANT.

HORACE H. DAY, of the City of New York, a witness produced on the part of Henry Newell, in the matter of the application of Edwin M. Chaffee, for the extension or renewal of a patent issued in his name on the 31st day of August, 1886, being duly sworn, says:—He is acquainted with the business of manufacturing India rubber, and has so been from the earliest introduction of the business in the United States. That as early as the year 1828, the art or process of spreading rubber upon cloth was known to him, and was then accomplished by partially dissolving the India rubber in the oil of turpentine, or

other known solvents of India rubber, and applying the same to cloth by means of a knife, or other thin straight edge of thin metal passing over the cloth, pushing the pulp or mass before it, allowing a portion to adhere to the cloth, and after successive applications, allowing the same to dry.

That deponent has been in the habit of doing the same more or less every year since.

This was the process then generally used for all purposes; but in January 1820, Dr. Howe, then of New York, and now President of the "Howe Pin Company," patented and adopted certain improvements, according to a description contained in a copy of said patent, the original of which is in deponent's possession, and copy annexed marked No. 1.

The manufacture was changed by this process of Dr. Howe. *The use of paint-mills, then in common and general use, some of which were constructed with the rolling and slipping motion, which has ever since continued to form the usual mode of preparing India rubber for use upon cloth and otherwise.* At first, the machinery was made quite small, and a large proportion of the spirits of turpentine added to soften the rubber, but as early as 1832, 1833, and 1834, the use of grinding or preparing mills, constructed generally of two iron rollers, one to revolve faster than the other—same as the sugar crushing mill, came into general use, and has so continued to this time to be the only process in actual practice to any considerable extent in the preparation and manufacture of India rubber in the United States since 1834.

The deponent has built, or caused to be built for himself, as many as thirty or forty such machines, which embraced the rolling and slipping motion, and general principle described and claimed by Chaffee at the part of his machine designated as the "preparing" part. Deponent knows of his own knowledge that machines substantially the same were in common and unrestricted use by others as early as 1834, for grinding rubber and incorporating coloring or drying materials with it; When the proportion of solvent used was greatly lessened, and the proportion of solvent or spirits of turpentine has been decreased for most purposes in the trade, until only from two to five gallons of spirits of turpentine to one hundred pounds of rubber was deemed enough, the quantity entirely depending upon the size and stiffness of the machinery, by many persons it was supposed that the use of a portion of solvent was both more economical and produced a smoother surface than to dispense with it entirely. And in many establishments rubber not softened by turpentine was commonly but not designedly ground, and drying or coloring materials incorporated with it, before Chaffee's invention. It was accomplished in this way where large and thick pieces of rubber were mixed with smaller ones. The turpentine used to soften the whole would act upon the thin pieces, and the thick would be softened on the outside and not in the middle, yet by the rolling and slipping action of the grinding or preparing machines, the whole became by frequent grinding thoroughly incorporated and reduced to uniform and equal consistence.

I have heard the testimony of S. T. Armstrong, and S. C. Bishop, and I am of the opinion that the machines now generally used are not like what is called the monster machine. When speaking of the "monster machine," as now used, 'tis well known that the preparing or grinding part is never connected with the spreading part, and the compound rolling and slipping motion is not and cannot be profitably or successfully used in coating or covering, or applying rubber to cloth as described in Chaffee's patent. The only machine I have ever heard of which was used by rolling and slipping for coating or covering cloth with rubber, was this part of the machine called the "monster," and that rolling and slipping action was not successful, and was soon changed to the simple, even motion patented by Atkinson, and is, as I am informed and believe, now being used by the owners of it without the rolling and slipping motion, while the preparing or grinding part of the machine has been changed to dispose with the bars, and substantially adopting the simple two-roll rolling and slipping grinding machine; the revolutions of one being more frequent than the other, the two placed horizontal, and the rubber on the top between the two, preparatory to the action of the machine upon the rubber.

This process of grinding rubber is now universal in this country, and a majority of the manufacturers dispense with all solvent; some use in a small portion of solvent and lighter machinery, which is found more profitable to some kinds of work.

The giving a monopoly of the patent issued to Chaffee in 1836, some portion of which is now in such general and free use, which has become so free by the act of the owners of the patent, and by the act of Atkinson, whose process is now in part the practice, while a part is according to Chaffee's, would lead to a most serious public injury, as the amount of machinery now built and in use likely to be affected, cannot much vary from 600,000 dollars.. In various ways Mr. Chaffee, like the owners of the patent, has freely looked on, and knowingly permitted persons and concerns to construct and use this machinery without setting up claim to it, or giving the least intimation, as I am informed and believe, of his intention to seek the renewal of this patent.

It is generally understood and believed that a few persons who are well known to be now fraudulently seeking to make the India rubber business a monopoly in the United States, are the real parties who are seeking to procure an extension of this patent of Chaffee; and it is currently reported and believed that a contract has been entered into between Chaffee and such parties, by which they, and not Chaffee, are to receive the principal part of the benefit to accrue from the renewal of this patent, thereby to produce a wrong and injury to the public, and violate both the spirit and intent of the law.

The statement of the witness also shows that at the examination now going on, the party opposed to the extension of Chaffee's patent have, through their counsel, called upon Chaffee to produce a copy of his petition and the testimony on which he relies to obtain an extension, and that such copy has not been produced; whereby the parties opposed to the extension of said patent are deprived of their just right. The witness further states that he has caused application to be made at the Patent Office to procure a copy of said Chaffee's petition and testimony, and the same has not been furnished, as he is informed, whereby he and others are likely to suffer wrong by not being permitted to answer such testimony and statements as the applicant may have thus secretly placed before the office, by which those opposed to the extension may be deprived of their legal and just rights in the premises.

In 1832 Mr. Wm. Atkinson made the invention, for which a patent was issued to him in 1835. This process with some slight alteration of arrangement, but involving the same principle, has continued in use. The use of uniform heat upon the calenders, used for applying or spreading the rubber upon cloth, was well known and practised before Chaffee's invention of the same thing without solvent; and Chaffee's machine for spreading never can be made to work without the use of steam-heated rollers, which, for the purpose of spreading cloth, was not his invention.

Copy of the Patent of Atkinson is attached, marked No. 2.

Regarding the claim in Chaffee's patent, in the rolling and slipping action, so far as the same may be considered as covering the preparing or grinding machine (and it certainly does cover this, if anything), the invention is not novel, and was not novel when he took out the patent; and therefore the patent ought not to be renewed or extended. As to claim of combining coloring matter without the intervention of a solvent (so called), there is nothing different from the doing it with a partial solution of the rubber; both are mere mechanical combinations: both are accomplished by the same principle and mode of action, and the result is the same, whether a small proportion of solvent (so called), is used, or none at all. In the use of a solvent lighter machinery is able to do the work; and before the goods are ready for market, the solvent is dried out, leaving the goods the same as if none had been put in.

In the present state of the art, rubber cannot be brought into a state of solution: with all the efforts of ingenious chemists up to this time, no means has yet been devised to dissolve rubber into a solution. The statement in Chaffee's claim, that he incorporates coloring matter (dry powder, such as lamp black) with rubber, without bringing it (the rubber) into a state of solution, is designed

to mislead. The process, principle, mode of operation, and effect of the process described by Chaffee for incorporating drying material, "without the use of a solvent," is the same as that which was then and had been commonly practiced by Dr. Howe, in 1829; by Atkinson, in '82, '83, and '84, and all the other makers of rubber goods before Atkinson.

The softening of rubber by spirits of turpentine did thereby enable the manufacturer the more easily and with lighter machinery to incorporate foreign matter; and when the article was manufactured into goods, the article put in to soften being dried out, left the fabric same as if no "solvent" had been used; and the only difference in effect of the two is that of economy or cheapness, which is a disputed question. Some manufacturers still declare the use of a solvent cheaper, and continue its use and with the same machinery.

So far, then, as any part of the process patented by Chaffee is either useful or practicable, the art was known and used before his alleged discovery.

And now I proceed to such parts of the process described as have not been found useful or practicable. First, then, the apron for carrying the rubber into the mastreating machine, this was found to be useless and impracticable, was almost immediately abandoned by the Roxbury Company, as witness understandings, and has never been used by any one else.

Second. The five or six bars extending from one end of the roller to the other, and placed a top, at short distances apart, were found to create much friction, and to accomplish but little work. Hence that was abandoned in all machines subsequently built, substituting in its place the old system of two rollers lying side by side, and sifting the powder in during the rolling and slipping motion—so long in common use.

Third. The third roller in the coating or covering part of the Chaffee machine, which was originally made to revolve much slower than the other, has been found not only to be useless, but to require a great additional amount of power and to be wholly useless, and has been abandoned altogether, together with all the compound, rolling and slipping action; and the simple two or three roll machines, the surfaces of which revolve with exactly uniform speed, have entirely taken the place; hence, as I stated before, all that was new in Chaffee's invention has been found upon practice to be in fact useless, and can only be claimed in the patent for purposes of deception, having been abandoned as both useless and impracticable.

Regarding coloring matter Dr. Howe's patent particularly describes coloring matter to be mixed with rubber. Lamp black is a very common coloring matter in paints, and this was the coloring matter referred to in Chaffee's patent. The practice of incorporating lamp black is very old, and was used by the natives of Brazil long before the invention of Dr. Howe, and is used up to the present time. This patent of Dr. Howe also refers to the rolling and slipping motion; he says: the said "colors or paints may be combined with the said composition (rubber) by any of the methods commonly used in mixing and preparing oil paints." Now it is a world-wide fact that, before the invention of Dr. Howe, in 1829, the use of two rollers, one revolving faster than the other, was one of the common devices for grinding paints and preparing oil colors. Hence the device of Chaffee was not new; except, perhaps, its combination with or in the absence of a solvent—but in this respect he claims the rolling and slipping action without the condition of no solvent, and thereby claimed what was not new, but as old and common as the act of manufacturing rubber itself.

Regarding the heating of the cylinders—the fact that all the machinery constructed with the rolling and slipping action, before Chaffee's invention, produced a high degree of heat upon itself while at work on rubber is notorious, and well known to every one at all conversant with the business of manufacturing India-rubber before 1836, and since. It is a subject of general understanding, that such rollers as are used and described by Chaffee, and which had been commonly used before his alleged invention, would become heated in a few minutes after the commencement of work, and very frequently when the rubber was being ground or passed through them, become so hot as to set fire under some circumstances, and generally to spoil the rubber composition.

To such an extent was this difficulty attendant upon the process of the compound rolling and slipping action, that the machines were required to be stopped and cooled off daily: some times frequently during the day. I have frequently thrown cold water upon the rolling and slipping machines, and found the water to boil from the high degree of heat; hence the use of rollers heated to about 200°, or any degree, was not new in 1836.

Sworn July 23, 1850, before me,
J. N. BALESTIER, Commissioner.
of Deeds.

HORACE H. DAY.

CIRCUIT COURT OF THE U. S.

IN EQUITY—RHODE ISLAND, SOUTHERN DISTRICT, S. S.

HORACE H. DAY

vs.

ISAAC HARTFORD,
NATHANIEL HAYWARD and
DANIEL HAYWARD.

I William Judson of the city of New York being sworn say that I am an Attorney and Counsellor at Law, and have been for many years the Attorney at Law, and in fact, and the counsel and managing agent of Charles Goodyear. That I was such attorney, counsel and managing agent of said Goodyear, before and at the time when the extension of the patent of E. M. Chaffee was applied for and obtained, and said Chaffee then knew the fact I was and had been such attorney, counsel and managing agent. That as Goodyear was, by agreement with Chaffee, to have for himself and licensees, and persons interested in his patents, the benefits of said extension, and gave my attention to procuring the same as the Attorney, Counsel and Agent of said Goodyear, and for my own as well as his benefit, and that of his licensees, as I had an interest in said Goodyear's patents. That it became necessary for me to act as I consequently did act nominally as the Attorney and Counsel of said Chaffee, and I exerted myself to the best of my ability in those capacities until the extension was obtained, when any duty I might have owed to said Chaffee ceased. The said Chaffee was well aware that on the obtaining of the extension the whole benefit thereof was reserved to Goodyear except certain advantages first agreed upon between Goodyear and Chaffee, and I negotiated and arranged to secure said Chaffee greater advantages than were originally promised to him, and exerted myself for that purpose in his behalf.

I further state that I insisted upon the terms of the agreement of September 5th, 1850, as matters of strict and actual right to Goodyear and Chaffee respectively as well as to myself, and I made no threats of any wrong to Chaffee, nor did I by menaces or any fraud, false representations, or concealment, coercion, or entice, or induce him to execute said agreement or any other.

I further state that although I did for a time withhold the payment of the last instalments due under the agreement of November 12th, 1851, it was not with the intention of depriving said Chaffee of the amounts accruing to him or of any part thereof, but because said Chaffee had for a long time been and then was associated in business with Bourne and Brown of Providence, Rhode Island, who were and have been for a long time engaged in infringing Goodyear's patents, as I am informed and believe, and I was desirous to procure or induce said Chaffee to leave said Bourne and Brown, of which intent I advised said Chaffee, and although he was at times urgent to obtain the money he at length submitted to my withholding the money, that this act might be amongst the circumstances to be employed in effecting a separation between said Chaffee and Bourne and Brown. But when I discovered that I could not effect

with Chaffee what I thus desired, I, on the 28d day of June, 1858, wrote to him a letter of which a copy was not kept, stating to him my readiness to pay him what was due under the agreement aforesaid. Finding that a copy of that letter had not been kept, I on the same day, addressed and caused to be sent to said Chaffee another letter of which a copy is annexed, marked A; to which said letters said Chaffee sent me an answer declining to receive the money. That all three of said letters were written before the first day of July, A. D., 1858.

And I further state that I never in any manner by act or word in violation of any faith or duty which I owed to said Chaffee, or by any means which were improper or unjust, led him into the making of the agreements aforesaid, or either of them, and any and every imputation to the contrary contained in the affidavits of Chaffee and Woodman in this matter, or in either of them, is unfounded and unjust.

I further state that I have never been the Attorney or Counsel for Edwin M. Chaffee in any matter whatever, except nominally as hereinbefore stated, and then I was actually the Attorney and Counsel for Goodyear, and not for Chaffee, although from the fact that the latter was the person in whose name the proceeding was necessarily conducted, I ostensibly appeared as his Attorney and Counsel.

I further state that the agreement that Goodyear and his licensees, &c., should have the benefit of the extension of said Chaffee's patent was made before said extension was applied for.

I further state that the defendants in this suit long prior to any contract between Chaffee and Day were authorized by me to use the said Chaffee's patent since the extension thereof as they have done, and they are not liable for any violation or infringement thereof to the best of my knowledge, information and belief.

Sworn this ninth day of August, } WILLIAM JUDSON.
1858, before me,

A

New York, June 28, 1858.

Mr. E. M. Chaffee.

Dear Sir:—I this day sent you a letter of which I omitted to take a copy, instructing you to draw on me at sight for the arrears due you on your assignment of patent, &c., apprising you of the reasons for so doing, and of which you were well aware.

Yours truly,

WILLIAM JUDSON.

CIRCUIT COURT OF THE U. S.

HORACE H. DAY

vs.

In Equity.

L. CANDLER, et al.

I, WILLIAM JUDSON, of the city of New York, being duly sworn, do depose and say, in addition to my former affidavit given in this cause, that I have read the additional affidavit of Edwin M. Chaffee, that I advised Charles Goodyear to make an arrangement with said Chaffee to secure the extension of the Chaffee patent for the benefit of the said Goodyear and his licensees, and procure the application for the extension of the said patent to be made, and conducted the proceedings upon the full knowledge and understanding that such arrangement had been made and acted therein as the counsel for said Goodyear and his licensees, and for their benefit; that at the time of the assignment and conveyance by said

Chaffee to me, dated September 5th, 1850, the arrangement between Goodyear and Chaffee, under which I had acted, was a subsisting, binding agreement, and the intention of the conveyance to me was to secure substantially the objects contemplated in the arrangement with Goodyear, which said Chaffee referred to at the time the conveyance to me was drawn, and the agreement with Goodyear was not cancelled or annulled until after the agreement with me had been executed and approved of by said Goodyear, and would not have been cancelled had not the conveyance to me been made.

I further say that I believed that the sum of fifteen hundred dollars paid to said Chaffee by the associates, according to the affidavit of L. Candee, was paid to him as an advance upon the agreement, and not as a bonus over and above the annual payments. I further say that the agreement of Nov. 11, 1851, was made at the request of said Chaffee, and to supply defects, which Chaffee said he had been advised existed in said agreement. And I further say that it is untrue that any proposition was at any time made by me, or according to my knowledge and belief by said Hayward to purchase the patent of said Chaffee.

WILLIAM JUDSON.

Sworn to before me this }
22d day of Sept. 1858. }

ERASTUS SMITH, U. S. Com'r.

Extract from notice "of facts expected to be proved by
CHARLES GOODYEAR" in case N. E. Car Spring Company
vs. Horace H. Day, read to William Judson by Mr.
Richardson in the trial of this cause.

"Fourth. That before said Chaffee's Patent was extended as hereinafter mentioned, said Goodyear and said Chaffee executed an agreement in writing under their hands and seals, dated the 23d day of May, A. D. 1850, of which a copy is annexed marked "A," and that said Goodyear on his part fully observed and complied with all the terms, conditions, covenants and provisions of said agreement, and that the same never were lost or was deprived of its force and efficacy as a contract in whole or in part, but now remains in full force and effect, unless by law the agreement of September 5th, A. D. 1850, hereafter mentioned, has been substituted for it or is to be taken as a qualified performance of the same."

MEMORANDUM OF AN AGREEMENT,

Had, made and entered into by and between Edwin M. Chaffee of Providence, in the State of Rhode Island, of the one part, and Horace H. Day, of the city of New York, of the other part, *witneseth*—

The said Chaffee, in consideration of the premises and of the agreements hereinafter contained, and in consideration of one dollar paid by the said Day to the said Chaffee, and the receipt of which the said Chaffee does hereby acknowledge, has agreed to sell and does hereby conditionally sell, transfer, assign, set over and convey to the said Horace H. Day and his executors, administrators and assigns a certain patent right granted to him, the said Chaffee, by the Government of the United States, for grinding India Rubber without a solvent, which original patent was dated August 31st, in the year 1836, and was regularly extended by the Commissioner of Patents for the term of seven years from the expiration of the original patent, hereby intending to conditionally convey to said Day and his legal representatives the said patent for its extended time and all other re-issues or extensions thereof, and all rights, title and

interest in, to and under said patent for said extended term. The condition of which conveyance being that the said Horace H. Day or his legal representatives shall, within six days from the date hereof, pay to the said Chaffee or his legal representatives the full sum of eleven thousand dollars in current money or current bank-bills. And the said Chaffee further covenants and agrees with said Day, that upon the payment of said sum of money, he, the said Chaffee, will, and his legal representatives shall make any and all further conveyances of said extended patent to said Day which may be necessary and proper for the full conveyance of said extended patent, and will, on the payment of said money, make and execute a full and formal deed of assignment of the same to said Day and his legal representatives, such as the law requires, for the full conveyance of said extended patent; and the said Chaffee does hereby upon the same condition as above, convey and fully transfer to said Day, all and every right the said Chaffee now has growing out of said extended term, including all beneficial contracts which have or may be made, growing out of said extended patent, not hereby intending to acknowledge or render valid any contract or power of attorney made by him, the said Chaffee, to William Judson, as the said Chaffee has this day executed a notice of revocation of all powers of attorney or contracts which he has made to said William Judson, as both the said Chaffee and the said Day claim and believe that said Judson, by default on his part, has waived and surrendered all rights, if any, that he might have had under any and all contracts made with the said Chaffee. And the said Chaffee further covenants and conditionally, as aforesaid, agrees, that on the payment of said sum of money, he will execute a full and final release to said Day and all other patentees he shall name, for, and on account of any infringement heretofore of said extended patent. And the said Day for himself and his legal representatives, agrees that unless he, the said Day, shall pay the said sum of eleven thousand dollars within the time named, within the time named, he will forfeit to the said Chaffee the sum of five hundred dollars, to be paid by him to the said Chaffee in current money, as a part consideration of this agreement, and as liquidated damages, and this agreement shall become void and of no effect.

It is further understood between the parties, that this conveyance is to transfer to said Day all rights and privileges that may have grown out of said extended patent; and should it turn out in any future litigation that there is due to said Chaffee any sum or sums of money on account of said patent, the same is hereby conditionally as aforesaid transferred to said Day and his representatives and assigns, and the said Chaffee is to render to said Day all proper aid in the establishing of his rights under said patent.

In testimony whereof the parties hereto have hereunto interchangeably set their hands and seals this first day of July, 1853.

In presence of

THOMAS S. ANTHONY. }
T. A. JENCKES. }

EDWIN M. CHAFFEE. [L. s.]
HORACE H. DAY. [L. s.]

Received and recorded July 6, 1853.

Received of Horace H. Day five hundred dollars, to be applied upon this contract, as follows, viz: If the said Day shall pay the said sum of eleven thousand dollars within the time named, this shall be received as so much thereof; if not, then it shall be retained as the forfeiture.

EDWIN M. CHAFFEE.

ARTICLES OF AGREEMENT

Made this 28d day of March, in the year of our Lord one thousand eight hundred and thirty-five, by and between the ROXBURY INDIA RUBBER COMPANY, a corporation duly established according to law, of the one part, and Ed-

WIN M. CHAFFEE of Roxbury, in the county of Norfolk and commonwealth of Massachusetts, of the other part.

WHEREAS, the said Chaffee heretofore, to wit, on the fourth day of March, in the year A. D. 1835, engaged in the employment of said corporation to devote his whole time and talents for their benefit for the term of five years, for the sum of one thousand dollars per year; and whereas the said Chaffee claims to have discovered a new and useful mode of solving India rubber, of covering cloth, leather, and other articles with the same, by which method he supposes he can save seven-eighths of the expense of solvents (except for cementing and the first coats on cloth, leather, &c.), and said process being equal or better in all respects than the most improved method now in use; and the said Chaffee is willing to vacate the contract now existing between said parties and to make a new contract, whereby to secure to said corporation the entire services of the said Chaffee, and the benefit and advantages of all the discoveries and inventions already made by him, and also all that may hereafter be made by him in any manner touching the substance called India rubber, and the use thereof, for and during the term of ten years from the date hereof, and to discover and disclose the same to a committee of the directors of said corporation at such time or times, and by such way and means, as said directors may require. The facilities and expenses of future experiments to be at the cost of said corporation, so far as regards implements and materials.

Now therefore the said Chaffee, in consideration of what is heretofore contained, and of the sum of one dollar to him paid, the receipt whereof is hereby acknowledged, doth hereby covenant, promise and agree to and with the said corporation, to devote his entire time and talents to the service, use and benefit of said corporation for and during the term of ten years from the day of the date of these presents, and to give and disclose to said corporation in such manner and at such times as the directors of said corporation for the time being shall require, all the secrets, discoveries, improvements and inventions already made, or that may be hereafter made or discovered, by said Chaffee, during said term, in any way touching the article called India rubber, and any and all the uses thereof; and that the said corporation shall, during said term, have all the sole and exclusive benefits and advantages to be in any way derived therefrom. And the said Chaffee also, for the consideration aforesaid, hereby agrees and promises that he will not in any manner or by any means, directly or indirectly, disclose, communicate, or discover to any other person or persons, corporation or corporations, any manner of knowledge of said new inventions, secrets, discoveries or improvements already acquired or obtained, or that may hereafter be made, acquired or obtained, in any way touching the solving and spreading of India rubber, or the manufacturing of India rubber goods, or articles of any kind of which India rubber is a component part, during said term of ten years; and that any and all patents that may be applied for touching the same, shall be for the sole benefit of said corporation. And the said Chaffee agrees to furnish, under oath, in due and legal form, all necessary specifications for procuring such patent or patents whenever thereto requested, and to deliver the same specification to the directors of said corporation, and to assign the same patent and patents, when obtained, and benefits and advantages to be in any way derived therefrom to the said corporation, by such other and further assignments and conveyances thereof as may be desired, proposed, and required by the directors of said corporation; for the time being, all costs of attorney, or other fees or expenses, procuring patents or making the requisite papers, &c., to be at the expense of the corporation.

And the said corporation on their part, in consideration of what is above written, and the sum of one dollar, the receipt whereof is acknowledged, hereby promise and agree with said Chaffee, if he shall well and faithfully keep and perform his engagements herein contained during said term, to pay him therefor a salary of fifteen hundred dollars per year, in equal sums, quarter-yearly, and also a further sum of one thousand dollars per year, payable in the same manner, provided the benefits, savings, and advantages induced by said new in-

vention, discoveries, and processes shall be as great as is herein supposed; and if less, then the said sum of one thousand dollars is to be paid less, in like proportion—the services and talents of said Chaffee to be fully devoted to the use of said corporation as aforesaid.

And the said corporation further agree to furnish said Chaffee with fifty shares in the capital stock of said corporation, at the present market value, on a year's credit—the stock to be holden by the corporation as security until the price is paid, with interest.

And said Chaffee, at his own suggestion (although said corporation have expressed entire confidence in his strict integrity, and firm, moral character), for the further assuring to said corporation a full and faithful performance of his part of the foregoing contract, hereby binds himself, his executors and administrators, firmly by these presents, to the said corporation, in the sum of seventy-five thousand dollars.

IN TESTIMONY WHEREOF said corporation have hereto set their seal, and the signature of the President thereof, and the said Chaffee hath affixed his seal and signature the day and year first above written.

Signed, JONA. DORR, Pres. [L. s.]
“ EDWIN M. CHAFFEE, [L. s.]

Signed, sealed, and delivered in presence of

Signed, S. A. QUINCY. }
“ ISRAEL MARTIN. }

WHEREAS, by the within indenture it was agreed that the R. I. R. Factory besides a salary of one thousand five hundred dollars per year to be paid to the within named Chaffee for his services, should pay him a further sum of one thousand dollars per year for ten years, provided the savings and advantages induced by his new inventions, discoveries and process of covering articles with India Rubber should be as great as within supposed, &c.

Now I, the said Chaffee, hereby acknowledge that I have received in advance and in compromise from said corporation the full amount of said further sum of one thousand dollars per year for and during the whole of said term of ten years, and in consideration thereof I hereby release and discharge the said corporation from that part of this covenant in the written indenture fully and entirely.

Witness my hand and seal this 15th day of February, in the year 1887.

Executed in presence of } EDWIN M. CHAFFEE, [seal.]
JAMES M. PERKINS. }

MEMORANDUM

The business and services contemplated by the within indenture, having been necessarily suspended by reason of losses and misfortunes, now I, the within named Edwin M. Chaffee, in consideration that the corporation have released me from further or future inventions, services in their employment, and of the sum of ten hundred and forty dollars to me paid, the receipt thereof is acknowledged, have canceled and do hereby cancel and discharge the contract so far as regards future inventions, services and payments fully and entirely.

Witness my hand and seal, this sixth day of March, eighteen hundred and thirty-eight.

EDWIN M. CHAFFEE, [seal.]

Executed in the presence of }
GEORGE GAY. } Ex'd., J. T. F.

INDENTURE,

MADE this eighth day of September, in the year of our Lord one thousand eight hundred and thirty-six, by and between EDWIN M. CHAFFEE, of Roxbury, in the County of Norfolk and Commonwealth of Massachusetts, of the one part, and the ROXBURY INDIA RUBBER FACTORY, a corporation duly established by law in said Roxbury, of the other part.

WHEREAS, the said Edwin M. Chaffee hath, by long study, expense and experience, invented a new and useful improvement in the application of undissolved Caoutchouc, to cloths, leather and other articles in coloring the same, without the aid of a solvent, and in the machinery used in the process, never before known or used. And whereas the said Edwin M. Chaffee hath thereof obtained Letters Patent of the United States of America, bearing the seal of the Patent Office of the said United States, signed by the Secretary of State of the United States aforesaid, and countersigned by the Commissioner of Patents in due form of law, under the date of the thirty-first day of August last past, granting to him the said Edwin M. Chaffee, his heirs, executors, administrators and assigns, for the term of fourteen years, the full and exclusive right and liberty of making, constructing, using and vending to others to be used, the said invention, discovery and improvement, as in and by said Letters Patent recorded in the office of the Secretary of State, more fully appears.

NOW THIS INDENTURE WITNESSETH, that the said Edwin M. Chaffee, for and in consideration of the sum of one hundred thousand dollars, to him in hand paid before the signing of this Indenture by the said corporation, the receipt whereof is hereby acknowledged, hath granted, assigned and set over, and by these presents doth grant, assign and set over to said corporation, their successors and assigns, the said Letters Patent, and all the right, title and interest of him the said Edwin M. Chaffee of, in, and to, the said invention and improvement so granted to him. To have and to hold the said Letters Patent, invention and improvement, with all the benefits and advantages thereof to the said corporation, their successors and assigns, in as full and ample manner, to all intents [and] purposes, as he the said Edwin M. Chaffee, by virtue of the Letters Patent, may or might have or hold the same, if this assignment had not been made, for and during all the rest and residue of said term of fourteen years, granted by the said Letters Patent as aforesaid. And the said Edwin M. Chaffee doth by these presents constitute and appoint the said corporation his assignee and grantee of and for the said invention and improvements, and the profits thereof for the remainder of the said term of fourteen years. And the said Edwin M. Chaffee doth covenant to and with the said corporation, their successors and assigns, that he the said Edwin M. Chaffee, his executors, administrators and assigns, shall and will yield up, and surrender; and that said corporation, their successors and assigns, shall and may, by virtue of these presents, have, receive and take, all the profits, benefits and advantages whatsoever, that may or shall be made or derived, for or by reason of said invention and improvement, and that he the said Edwin M. Chaffee, his executors, administrators or assigns, shall and will do and execute, or cause to be done and executed, all and every other act and acts, thing and things, devises and assignments in law and in equity whatsoever, for the further, better and more perfect assigning and assuring of the said Letters Patent, and the right, title and interest of him the said Edwin M. Chaffee, his executors, administrators and assigns therein, and in the said invention and improvement; unto the said corporation, their successors and assigns, as by the said corporation, their successors and assigns, or their counsel learned in the law, shall be reasonably devised, advised or required.

IN TESTIMONY WHEREOF, the said Edwin M. Chaffee hath hereto set his hand and seal, the day and year first above mentioned.

Signed, sealed and delivered

In presence of us,
JOHN A. DOER,
GEORGE GAY.

EDWIN M. CHAFFEE. [L. s.]

Commonwealth of Massachusetts, Norfolk County, ss: 9th September, 1886, then personally appeared the above named Edwin M. Chaffee, to me known, who executed the above assignment, and acknowledged the foregoing assignment to be his free act and deed. Before me,

D. A. SIMMONS, Not. Pub. and J. Peace.

To William Judson, Esq., of the city of New York.

Please take notice that I have and do hereby revoke, annul, cancel and render void, and of no effect the power or letters of attorney made and executed by me to you, in reference to my Extended Patent, for grinding rubber without a solvent, &c., dated Sept. 5th, 1850, and the addition thereto, dated Nov. 12th, 1851, copies of which are hereto annexed, and you are hereby forbid in any way acting under and by virtue of said power of attorney, as you have failed to perform and keep your part of said agreement, and all acts done by you will be held void.

Given under my hand and seal, at Providence, in the State of Rhode Island, this first day of July, 1883.

EDWIN M. CHAFFEE, [L. s.]

Witnesses present,
T. A. JENCKES.
THOS. S. ANTHONY.

Original of which the above is a true copy, served July 2d, 8½ o'clock, A. M., upon Wm. Judson by me.

JAS. WALDRON.

INDENTURE OF ASSIGNMENT AND AGREEMENT, made this first day of July, 1848, by and between Charles Goodyear of the one part, and Leverett Candee, as general partner in a special partnership located at New Haven, in the State of Connecticut, and doing business under the name and firm of "Leverett Candee;" the Hayward Rubber Company, so called, being a manufacturing company, incorporated by the laws of the State of Connecticut; the Newark India Rubber Manufacturing Company, located in Newark, New Jersey, being a company duly incorporated by the laws of the State of New Jersey; and Ford & Co., of New Brunswick, New Jersey, of the second part:—

WITNESSETH, That I the said Charles Goodyear, the party hereto of the first part, for the consideration and on the terms herein mentioned, do bargain, sell, alien, assign, and make over and convey to the said parties of the second part, *the sole and exclusive right to use all my preparations of India rubber, and all my improvements in the preparations and use of India rubber, in the manufacture of boots and shoes of all kinds; and also all preparations and improvements in the preparation of India Rubber in which I, the said Goodyear, have or may have any interest by contract, assignment, or otherwise, so that they, the said parties, shall have the sole and exclusive use in the shoe business of all my improvements patented or to be patented, made and to be made and patented, and whether patented or not, for and during the unexpired term or terms of my said patents, and of all patents issued, or which may be issued to me, bearing any date whatever, and of all or any renewals thereof, or of any of them, and of all which may be issued to any other person or persons for improvements made by me, and for and during the unexpired term of any patents or renewals of patents owned by me, or which may hereafter be owned by me, or in which I have or may have any interest, issued or hereafter to be issued, embracing herein all future improvements and preparations of India rubber of every description, whether patented or not, so far as the same are or may be applicable to the manufacture of boots or shoes, or may or can be used therein; and also all tariffs, benefits or advantages, reserved, covenanted or secured to me by,*

in, or under any licenses or agreements for the use of such improvements in the manufacture of boots or shoes given or made to or with any person or persons, company or companies whomsoever: all which licenses and agreements are hereby assigned to the said parties hereto, and said Goodyear covenants that he will do nothing to prevent, molest, or hinder or deprive the said parties of the second part of the full enjoyment of the same.

AND it is further covenanted and agreed, that the said parties of the second part will do all that may be proper and necessary to sustain said patents, and defend the same against piracies and infringements, which is to be done at their expense. And they are to pay the costs and have the avails of all suits which they may commence in my name or otherwise, and liberty and authority is hereby given to use my name in all cases where it may be deemed by my counsel, *S. P. Staples* or *William Judson*, necessary or proper: the said parties of the second part saving me from all costs. In consideration of the premises, the said parties of the second part agree to pay to said Goodyear the sum of ten thousand dollars in cash, or notes made equal to cash, and also to pay said Goodyear, during the continuance of this agreement, one half cent, or five mills, on each pair of boots or shoes which may hereafter be manufactured by them, *or any one under them*, under this agreement, and so long as said patents shall continue or be continued in force by renewal, extension or otherwise, or until said patents are set aside by the courts of the United States, in the last resort, and so long as this agreement remains in force, *all the shoe business in which India rubber is used as a component part thereof, shall be deemed to be taken and carried on under this agreement and license.* Further, said Goodyear agrees to do all that may be legal or proper, by and with the advice of his counsel, to amend if necessary, any of his said patents, and so secure more perfectly any of his said improvements, so that said grantees and licensees shall have, so far as possible, the sole and exclusive use of said improvements for the shoe business, as aforesaid.

AND said Goodyear further agrees to make any other and more formal instruments, deemed advisable by counsel, to carry out this memorandum of an agreement. The term of my improvements, as used in this agreement, to extend to all improvements and patents in which I am or may become interested. Said licensees are to stamp all *goods by them made* and sold "Goodyear's Patent."

AND IT IS FURTHER AGREED, that if there should be any surplus of the fifteen per cent. provided and set apart for certain purposes, by an agreement with said Staples and Judson, after satisfying said purposes, then said parties herein of the second part shall have the benefit of it, towards aiding them in the expenses they may be at in prosecuting the suits hereinbefore contemplated, so far as the same may go; but all other expenses they are to bear in any event, without recourse to said Goodyear.

IN WITNESS WHEREOF, the parties have executed these presents, this first day of July, one thousand eight hundred and forty-eight.

In presence of

CHARLES GOODYEAR, [L. s.]
 LEVERETT CANDÉE,
 HAYWARD RUBBER Co.,
 By HENRY BURR, Pres.
 HIRAM HUTCHINSON, Pres.,
 JOHN SCOTT ROUSE, Sec., [L. s.]
 FORD & Co.

The words "parties of the second part," interlined in the second page, over Candée and Hayward, erased, and the word "or," substituted before execution.

SAMUEL CASSIDY.

STATE OF NEW JERSEY, HUDSON COUNTY, ss.

Personally appeared before me, the subscriber, a Master in Chancery in and for said State, Charles Goodyear, who, I am satisfied, is the grantor named in, and who executed the foregoing, and to whom I first made known its contents; he thereupon acknowledged he had signed, sealed, and delivered it as and for his voluntary act and deed, for the uses and purposes therein expressed.

Acknowledged before me, this 10th July, 1848.

SAMUEL CASSEDY,
Master in Chancery.

Rec'd and rec'd, August 14, 1848.

AGREEMENT.—GOODYEAR, STAPLES, AND JUDSON, JULY 1, 1848.

Fifteen per cent. of all my tariffs arising from the manufacture of India Rubber goods made by the use of my improvements patented, or to be made and patented, is hereby appropriated to defray the expenses of taking out, renewing, extending, and defending my patents and improvements, and sustaining the same by all lawful ways and means, and by suits and legal proceedings, and otherwise, and by compromises and settlements, when such compromises and settlements are advised by my counsel, and not otherwise.

And I hereby authorize and empower Seth P. Staples and William Judson to receive themselves, or to appoint a Trustee to receive for them, the aforesaid tariffs, subject to their order and control.

And in consideration of their services, and the expenses they may be at in the premises as solicitors, attorneys and counsellors, and agents, which they agree to render and perform, they are to receive and appropriate to the purposes aforesaid, the aforesaid tariffs; and they are to keep an account of their services and expenses, and render the same under oath, if required; and from the avails of said tariffs, pay themselves for all money expended, and for all services as agents, attorneys and solicitors, and counsellors, which they may perform or render, a fair and reasonable compensation, having reference to the nature and importance of the business, and the usual and customary services in such cases; and where successful, it is my wish that my counsel should be more liberally rewarded, having regard to the success as well as the services.

An account of the services and expenses made out and rendered under oath, (shall be taken and deemed proof till the contrary is made to appear) if the money charged has been expended, and the services rendered, as charged.

And said Staples and said Judson agree to accept this provision made for them, and render their services accordingly, and after paying themselves for all services and expenses rendered by themselves, their agents, or any attorney or counsellor who may be associated with them, they are to pay the balance, if any, over to me, Charles Goodyear. Whatever sums of money may be recovered as damages, are also to be accounted for, after deducting all expenses.

And it is further agreed, that said Staples and Judson may call in to their aid any attorney or counsellor whom they may select, on consultation with said Goodyear, but to be paid out of said fund for such services as he may render.

Said Staples and Judson are to appoint all necessary attorneys, solicitors and counsellors, when it may be necessary to take legal proceedings in any court in any other State, who are in like manner to be paid out of said tariff; and I, Charles Goodyear, fully authorize and empower said Staples and Judson by themselves, or by a trustee to be by them appointed, to collect the aforesaid fifteen per cent., and said damages, and to give good and sufficient receipts therefor, and to appropriate the same as aforesaid.

In witness whereof, the parties have hereunto set their hands, this first day of July, A. D. 1848:

C. GOODYEAR,
S. P. STAPLES,
W. JUDSON.

WHEREAS, the subscribers have become the sole and exclusive proprietors to the use of all the improvements made in the preparation and manufacture of India Rubber into shoes and boots, by Charles Goodyear, or in which he is or was interested, so far as said improvements are applicable to the manufacture of boots and shoes, and upon which each company so manufacturing has agreed to pay a certain tariff on each pair of shoes, or boots so made:—

Now, in consideration of the premises, we, the subscribers, each company for itself, and not one for another, and each in consideration of the execution hereof by the others, agree with Jonathan O. Ackerman, of New Brunswick, New Jersey, who is hereby made and appointed the Receiver and Trustee, to enforce all the provisions hereof, to pay to him three cents and a half for each and every pair of shoes or boots so made, and not destroyed as not merchantable, to the number of five hundred pair per day for each company or firm subscribing this agreement, and for each pair of shoes or boots over five hundred pair per day, five cents per pair, payable as aforesaid, to be computed by averaging the number manufactured during and at the end of each six months, exclusive of Sundays, and each company and firm is to keep an accurate and full account of the shoes and boots manufactured, and render the same, and make payments thereon to the said Jonathan O. Ackerman once in six months, which accounts shall be open to the inspection of any one interested in this agreement, at all reasonable times. And all the India Rubber shoes and boots made during the continuance of this agreement, by either the parties, or by any person or persons under them, or by or with their consent, shall be deemed and taken to be manufactured under it, and shall be stamped openly and visibly on the outside of the sole, with the words "Goodyear's Patent;" and all damaged shoes put into the market, shall, in like manner, be stamped with the word "damaged." And said Jonathan O. Ackerman shall retain fifteen per cent. on the sums so received, to pay the expenses of any litigation or disputes which may grow out of said patent rights, in sustaining or defending the same, subject to the call of the Attorney, Solicitor and Counsel, who may have the conduct and management of said disputes or litigation, as the same may be needed for the purposes aforesaid. And said Jonathan O. Ackerman is to pay Charles Goodyear one-half of one cent on each and every pair of said shoes and boots so made and so paid, payable to said Goodyear, or his order, less fifteen per cent. of the amount thereof, which shall be paid to Seth P. Staples and William Judson, under an appropriation made by the said Goodyear, for the maintenance of his various patents, under and by virtue of an instrument executed by said Goodyear to said Staples and Judson. And said Jonathan O. Ackerman is to pay William Judson one-fifth ($\frac{1}{5}$) of the balance, as the same may be received. And the balance the said Ackerman is to pay in equal shares to the subscribers, as the same may be received and ascertained. The payments of tariffs are to commence, and be computed from the first day of July, 1848. This agreement is to be left with Jonathan O. Ackerman, with a right to each party to have a copy, which may be used as an original by all the parties to the same.

In case the whole fifteen per cent. is not wanted for the purposes aforesaid it is to be divided among the subscribers, and if more is wanted, the subscribers are to make up what is wanted.

And the said subscribers hereto, that is to say, Leverett Candee, as general partner in a special partnership, located at New Haven, Connecticut, and doing business under the name and firm of "Leverett Candee;" the Hayward Rubber Company, so called, being a manufacturing company incorporated by the laws of the State of Connecticut; the Newark India Rubber Manufacturing company, located at Newark, in the State of New Jersey, being a Company duly incorporated by or under the laws of the said last-named State; and the co-partnership or firm of Ford & Company, of New Brunswick, in the State of New Jersey, do severally, each for itself or themselves, and not the one for the other of them, covenant, promise and agree to, and with the others of them, and to and with each of the others of them, that they will well, truly and faith-

fully do and perform all things herein above agreed to be done and performed on their part, and that they will make the payments herein above mentioned to the said Jonathan O. Ackerman, at the times, and after the rates, and in the manner above mentioned. And that the amounts of such payments shall be apportioned and distributed, and paid over by the said Ackerman, as above set forth.

And they do further covenant, and in the manner aforesaid agree, inasmuch as they have mutually agreed, that the number of licenses under the aforesaid patent, so far as they apply to the manufacture of boots and shoes, shall not be increased beyond the above-named parties, and the Goodyear Metallic Rubber Shoe Company, Onderdonk & Letson, and Joseph H. Dorr, without the consent of a majority of the following six parties, viz., the above-named four parties hereto, the said Goodyear Metallic Shoe Company, and the said Onderdonk & Letson; they, the aforesaid parties above named, shall not, and will not, either severally or collectively, by assignment, license, or otherwise, give license to any other person or persons, firm or firms, company or companies, to use the said improvements, or any of them, in the manufacture of boots and shoes, without the consent of the aforesaid majority so as in anywise to increase the number of licenses without the consent of such majority as aforesaid. And they further agree in manner aforesaid, that the said patents and improvements, so far as applicable to boots and shoes, shall be maintained and defended, and piracies and infringements restrained and prevented, so far as practicable, and if necessary for that purpose, a sufficient number of suits shall be prosecuted and carried on to final judgment, until the patents are set aside in the highest courts to which they can be carried, and that in case the aforesaid 15 per cent., to be reserved by said Ackerman, shall not be sufficient to defray the expenses, costs and charges of so maintaining and defending the said improvements and patents, and preventing infringements, the said parties will severally contribute their equal shares and proportions to make up the deficiency.

And it is further expressly agreed, that all moneys which may become due or payable from the Goodyear Metallic Shoe Company, or any other person or persons, under any licenses given or to be given to use the aforesaid improvements, or any of them, for tariffs reserved by the said parties hereto or due to them, shall be payable to, and shall be collected by the said Jonathan O. Ackerman, and shall be held and distributed by him according to the provisions hereof, except so far as in any such licenses the half cent per pair of boots or shoes may be authorized or directed to be paid to the said Charles Goodyear by such license. And for that purpose, the said parties hereto expressly order and direct the payment of all such tariffs to the said Ackerman, to be held by him, and distributed in the manner and in the proportions above appointed. And it is hereby further expressly agreed, that in case the said Ackerman shall die, or at any time hereafter refuse to collect the moneys herein agreed to be paid to him, and distribute the same according to the provisions hereof; or in case a majority of the said four parties hereto shall think proper to substitute another person or persons in his stead, to collect and distribute the moneys aforesaid, a person or persons shall and may be designated by a majority of the said four parties, and upon such designation being made in writing, the person so designated shall be clothed with all the power and authority herein conferred upon the said Ackerman, and all the payments due, or thereafter to become due, shall be made to the person or persons so designated, who are hereby expressly authorized to collect and receive the same, and to distribute and pay the amounts collected according to the provisions hereof. And upon such designation, the parties hereto shall and will forthwith execute and deliver to the person or persons so designated, all necessary and proper covenants and agreements, to enable him or them to make such collections, and pay and distribute the same as aforesaid.

These Presents are to continue in force until the expiration of the patents for the said improvements, and all renewals thereof, or until the said patents shall be set aside or declared void in the highest court to which the questions can be carried.

In witness of all which, the parties aforesaid have executed these presents, this first day of July, one thousand eight hundred and forty-eight.

In the presence of

FORD & CO.

The words "of the sole," in second page, and the words "or due to them," on fifth page, interlined before execution.

DANIEL DIETTERICH.

HIRAM HUTCHINSON,

President. [L. S.]

Attest, ABRAM DENMAN, Sect. P. T.

Attest, GEO. P. PERKINS.

HENRY BURR,

President Hayward Rubber Co.

Witness, GEO. S. EVERETT,

LEVERETT CANDEE.

I, William Judson, the owner of one-eighth part of all tariffs due to or arising from the improvements of Charles Goodyear, mentioned in the foregoing instrument, do hereby assent to the foregoing agreement, so far as such improvements are applicable to and used in the manufacture of boots and shoes, and consent to receive the one-fifth part of the tariffs in the foregoing instrument mentioned, in full for my claim for the said one-eighth. This consent, however, to be confined to the manufacture of boots and shoes only.

Witness my hand and seal, this first day of July, one thousand eight hundred and forty-eight.

WILLIAM JUDSON.

In presence of H. M. ORANE.

MEMORANDUM OF AN AGREEMENT BETWEEN CHARLES GOODYEAR AND WILLIAM JUDSON.

In consideration of the stipulations herein contained, and to carry into effect more fully an agreement heretofore made with William Judson, I hereby agree with him that in all the licenses, sales or transfers I may make with others for the use of my improvements in the preparation of India Rubber for manufacturing purposes, and for manufacturing all kinds of India Rubber goods, to which my said improvements are applicable, I will make provision for, and secure to said Judson his one-eighth interest in the proceeds of my improvements, as heretofore bargained with him, by inserting a clause in all sales, transfers or licenses which I may hereafter make. That said one-eighth part shall be paid to said Judson, and not to said Goodyear, and that a tender shall be made of the one-eighth part of the bonus, or purchase money, or consideration received for such transfers, sales or licenses, or the same shall be void.

As witness my hand and seal this first day of July, 1848.

CHARLES GOODYEAR. [L. S.]

Received and recorded, Aug. 14, 1848.

SPECIFICATION OF A PATENT

For a Machine for spreading India Rubber upon Cloth, granted to

WILLIAM ATKINSON,

Lowell, Massachusetts, 15th August, 1835.

To all whom it may concern.

BE IT KNOWN, That I, WILLIAM ATKINSON, of Lowell, in the county of Middlesex, and State of Massachusetts, have invented an improved machine,

for the purpose of spreading Caoutchouc or India rubber in solution upon cloth, or other material, and of drying the same by steam; and I do hereby declare, that the following is a full and exact description thereof:

The cloth to be coated with India rubber, is to be made into an endless web, by sewing its two ends together; and other articles such as skins of leather, may be coated therewith by spreading them on and affixing them to an endless web so made. This web is passed around cylinders, which are made to revolve, and the dissolved Caoutchouc or India rubber is spread upon the endless web by the aid of a third cylinder, placed parallel to and nearly in contact with one of the cylinders around which the endless web passes.

The dimensions of the machine may, of course, vary according to the width and length of the material to be coated or covered. In designating certain sizes and proportions of the respective parts therefore, I do so only for the purpose of facility in descriptions, and of indicating which has been found to answer well in practice.

I make a frame of wood which may be sixteen feet long, and three feet six inches wide, the bottom timbers being sufficiently stout to support the carriage and other parts to be presently described. Into the ground sills, or lower part of this frame, uprights are morticed, which serve to support a rail on each side, which may be three feet four inches from the floor; leaving, however, the sills sufficiently clear within the uprights to form a railway upon which the rollers of a carriage may traverse back and forth.

Upon suitable supports at one end of this frame, there are placed two cylinders of metal, usually of cast iron, each of them one foot in diameter, and two feet nine inches long. The axes of these cylinders are in the same horizontal plane and parallel to each other: around the inner cylinder the web to be coated passes; and the outer cylinder is made adjustable by means of screws or otherwise—so that it may be brought into contact with, or removed to any required distance from the web or cloth. These cylinders are geared together by means of toothed wheels upon their shafts, cut sufficiently deep to admit of the requisite adjustment. The shaft of a pinion by which they are driven has on it a fast and a loose pulley, when revolving they turn inward.

The second, or carriage cylinder, around which the endless web passes, is supported upon a carriage furnished with wheels or rollers, which run upon the lower rails or sills. This cylinder is also to be made of metal, and when used as a drying cylinder it should be large in diameter, say three feet. A windlass is placed at the back end of the frame, from which ropes pass to the cylinder carriage, serving by means of a winch, to draw the carriage so as to render the cloth taut. Steam is to be admitted into the cylinder through a hollow gudgeon. For this purpose a steam tube is attached to the gudgeon, its other end passing through a stuffing box in a larger tube attached to a boiler, thus admitting of the requisite motion of the carriage.

In order to apply the solution of India rubber to the cloth, &c., and to confine it to the proper width, we fit two cheeks of pieces of wood or metal, so as to rest upon the two contiguous rollers, one at or near each of their ends, and these when in their places, convert the rollers into a trough or hopper, for containing the solution. The distance of these pieces from each other is regulated by attaching them together by means of a frame or rod at the upper sides, so that they may slide and be affixed in their places by thumb screws or otherwise.

When spreading the rubber on the cloth it is necessary to prevent its adhering to the outer roller, and this among other methods may be effected by means of wet sponges or brushes laid along it, or by keeping it wet in any other way.

I intend, sometimes, to use the drying and spreading apparatus detached from each other, in which case but two rollers of any convenient size will be employed in the drying process, and steam may then be introduced into each of them.

I intend, also, sometimes instead of the large drying cylinder above described, to cause the cloth to pass over a stationary metallic box or steam case, in its passage from the spreading to the steaming or carriage rollers, making the

upper surface of this case convex, that the cloth may be kept in close contact with it, the space between the two sides of such box or case, need not be more than from one to two inches.

What I claim as my invention, and for which I ask "letters-patent," in the above described apparatus, is a machine for spreading India rubber upon cloth, constructed and operating substantially in the manner of that herein set forth. I do not claim the mere spreading of the substance by means of cylinders, this having been previously done—but we do claim the employment of two cylinders for the purpose, connected together and made to concur in producing this effect, acting upon the principle described. I also claim the general arrangement and application of the apparatus for the drying of the solution by means of steam, either in combination with, or separate from the spreading apparatus, as I contemplate the using of them either conjointly or separately, as herein before set forth. I do not claim drying cylinders or boxes heated by steam as my invention or discovery—but the combination and application thereof, in the way and for the purpose by me herein fully made known.

WILLIAM ATKINSON.

NEW HAVEN, March 27th, 1851.

It is agreed between the parties hereto, Messrs. Bourn & Brown, E. M. Chaffee and Charles Goodyear, as follows, viz.:

That Mr. Chaffee shall go to Providence, with said Bourn & Brown, for the purpose of executing the orders of said Goodyear, for India rubber goods, such as ships' sails, carpeting, air work, round and driving reins, pervious and perforated shoes, trunk and other straps, and carpet bags—with the view and expectation, that said Chaffee and Bourn & Brown shall within one year from the date hereof, obtain on reasonable terms from said Goodyear, a license to manufacture some one or more of the branches aforesaid.

It is agreed by said Goodyear, that if an assortment of specimens made in a workmanlike manner, of articles according to the schedule hereto annexed, shall be made by said Bourn & Brown and said Chaffee, at the expense of said Goodyear, within one year; that in such case, said Goodyear will, within one year from the date hereof, be instrumental in obtaining a license from the shoe associates, for said Bourn and Brown, and said Chaffee, for three hundred pairs of shoes per day, at the same rate of tariffs that is paid by the other shoe companies and Dr. Hartshorn to said shoe associates.

It is agreed by said Goodyear, that the terms for the concurrent right to any other branch of manufacture before alluded to, shall be on as favorable terms as is granted to any other persons. It is mutually agreed by the parties hereto, that in case said Goodyear shall be wholly unable to obtain the shoe license as aforesaid, said Goodyear shall pay to said Bourn & Brown and said Chaffee in all, the sum of five thousand dollars.

CHARLES GOODYEAR.

BOURN & BROWN.
E. M. CHAFFEE.

SCHEDULE OF ARTICLES ORDERED BY CHARLES GOODYEAR, FROM MESSRS.
BOURN & BROWN AND E. M. CHAFFEE.

1000 yards sail cloth.
1000 yards carpeting.
1000 yards pervious vellum.
1000 do fine sheer gum, assorted colors.
8 pieces of air work from fibrous plates, goods of each kind described in said Goodyear's books and plates.
5 pairs of shoes of 5 different styles each of pervious and perforated goods.

CHARLES GOODYEAR.

BOURN & BROWN.

BOURN & BROWN.
E. M. CHAFFEE.

WHEREAS, I, Edwin M. Chaffee, have lately procured an extension of my patent, dated 31st August, 1836, for seven years from the expiration thereof, the expenses of which have been large, by reason of the opposition thereto—but which expense has not yet been ascertained, and cannot be at present: and, whereas, said patent at the time it was extended, stood in the name of Charles Goodyear, and was held for his benefit, and the benefit of those who had a license, or who had a right to use his vulcanized India rubber, or India rubber prepared and cured according to, and under his patent, dated the 15th of July, 1844, and re-issued the 25th of December last: and, whereas, said C. Goodyear agreed with me, for himself and others, using my said patent under him, that they would be at the expense of applying for the extension of said patent, and make me an allowance for the use thereof, in case the same should be extended, to the amount of three thousand dollars, and other considerations; and, whereas, William Judson, Esq., has had the management of said application for said extension, and has paid and become liable to pay, the expenses thereof; and agreed to guarantee me said sum of three thousand dollars, that I shall finally receive the same. Now I, hereby, in consideration of the promises, and to place said patent so that in case of my death, or other accident or event, it may enure to the benefit of said C. Goodyear, and those who had a right to the use of said patent, under and in connection with his licensees, according to the understanding of the parties interested; nominate, constitute, and appoint said William Judson my trustee and attorney irrevocable, to hold said patent and have the control thereof, so that no one shall have a license to use said patent or the improvements secured thereby, other than those who had a right to use the same, when said patent was extended, without the written consent of said Judson, first had and obtained from him, and said Judson for himself and those interested, agreed with me said Chaffee, that the expenses of extending said patent shall all be paid without charge to me—and further, that I shall be paid said sum of three thousand dollars on or before the first day of July next, with the interest; and said Judson and those for whom he acts, are to be at all the expense of sustaining and defending said patent without any charge to me.

NEW HAVEN, May 16th, 1849.

To the Associates of the Manufacture of Goodyear's Gum Elastic Shoe.

This will certify, that I, one of the association, am writing to grant a license to Messrs. Bourn & Brown, for the manufacture of shoes to the number of one hundred and fifty pairs per day, on the same terms of other licensees.

L. CANDEE.

I think favorably of Mr. Candee's suggestion, and am willing to concur in a general meeting of the shoe associates and licensees, in granting a license to Messrs. Bourn & Brown, for making one hundred and fifty pairs per day.

H. HUTCHINSON, *President, Newark F. R. M. Co.*

NEWARK, N. J., May 17th, 1849.

We will consent, at a meeting of the associates, to the granting of a license to Messrs. Bourn & Brown, upon reasonable terms,

FORD & CO.

NEW BRUNSWICK, May 17th, 1849.

July 15th, 1852.

It is agreed between L. Candee and Nathaniel Hayward, on the one part, and E. M. Chaffee on the other part, that whereas, the said Chaffee has conveyed to

Wm. Judson, in trust, his right and title to his (the said-Chaffee's) patent for a Rubber Calender Machine, which right was renewed for seven years, on or about the 29th day of August, 1850; and whereas the said Chaffee is entitled, per existing agreement, to an annual payment of \$1,500 per annum for said right, so long as it exists in law. Now, it is understood between the parties aforesaid, that said Chaffee is to receive an additional sum of one thousand dollars per annum for the said right aforesaid, making in all the sum of twenty-five hundred dollars, payable quarterly, in payments of \$625, first payment to commence on the first day of September next; and a further sum of five thousand dollars is to be paid to said Chaffee, after it is decided in the highest judicial court, or a final decision is had, establishing the title to the aforesaid patent right, and the said Chaffee engages and agrees to use his efforts to aid and facilitate to a final decision the prosecuting of each and every infringer on said patent, as it may be deemed best to prosecute by Wm. Judson or others interested in the premises.

The conditions of the aforesaid agreement are, that as the said Chaffee is now concerned with Bourn & Brown of Providence, in the manufacturing of Rubber shoes, in opposition to the will and consent of the owners of the Shoe Right, under the patent of Charles Goodyear, it is understood that the said Chaffee is to use his influence to stop at once the said manufacture, and that he will not consent to continue the same any longer than to close up, dispose and sell what shoes they may now have on hand, and that he will, if possible, disconnect himself from all business relations with said Bourn & Brown, so that if they persist in continuing the manufacture of shoes, he, the said Chaffee, will not aid or abet them in said business.

Mr. JONATHAN ACKERMAN, Trustee under the agreement between the undersigned manufacturers of boots and shoes, and licensees under Goodyear's patents, dated July 1, 1848, is hereby authorized, from time to time, out of the fifteen per cent. set apart in his hands, to pay the expense of litigation as therein provided, to pay the drafts of Wm. Judson, Esq., made against the said fifteen per cent. upon him, as the said Judson shall require, for the expense of the litigation therein provided for. And the payments heretofore made by the said trustee upon the orders of the said Judson, are hereby allowed as a good accounting by the said trustee, to the extent of such payments.

Dated New York, September 18, 1850.

Witness

L. B. WOODRUFF, as to }
N. Ind. R. Co. }

{ For the Newark R. M. Co., HIRAM
HUTCHINSON, Pres.

Hayward R. Co., }
L. CANDLER, }

{ Hayward R. Co., W. A.
BUCKINGHAM, Treas.

Witness to FORD & Co., }
J. FORD. }

{ LEVERETT CANDLER,
FORD & Co.

To William Judson, Esq. of the City of New York:

Take notice that I have purchased of Edwin M. Chaffee his patent for improvement in the manufacture of India Rubber, dated August 3d, 1836, and extended August 31st, 1850, for a further term of seven years, and I hereby forbid you and all other persons using or in any way infringing said patent, and I also notify you that I am ready and willing, and hereby offer to pay any and all sums of money that may be due you, if any there is, on account of money advanced in the procuring the extension of said patent, if any were so advanced by you, or in any other way paid out, to, or for said Chaffee, on account of said patent, and upon your sending to me information of the amount, if any there is due you on account as above, I will pay or cause the same to be paid to

you, or to such person as you shall nominate and appoint to receive the same immediately.

Given under my hand at the city of New York this second day of July, 1858.

H. H. DAY.

THE UNITED STATES PATENT OFFICE.

To all to whom these presents shall come, greeting:

There is to certify, that the enclosed is a true copy from the records of this office.

In testimony whereof, I, Charles Mason, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this sixteenth day of September, in the year of our Lord, one thousand eight hundred and fifty-three, and of the Independence of the United States the seventy eighth.

CHARLES MASON.

Witness, by sundry assignments executed by Charles Goodyear of New Haven and others, the sole and exclusive rights to manufacture and vend India Rubber Boots and Shoes under the patents of the said Goodyear has become vested in L. Gaudin & Co., The Hayward Rubber Company, The Newark India Rubber Manufacturing Company, and Ford & Co. as associates; and The New Brunswick Rubber Company, The Goodyear Malleable Rubber Shoe Company, and Hartshorn & Co. as Licensees.

Also witness, by agreements between Edwin M. Chaffee and William Judson, the right to license persons to use the patent and extension thereof granted to the said Chaffee for an improvement in the preparation and application of India Rubber to all kinds of cloths, without the aid of a solvent, has become vested in the said Judson.

Now know your Inventions made this 15th day of May, A. D., 1853, by and between the said L. Gaudin & Co., the said Hayward Rubber Company, the said Newark Company and the said Ford & Co., associates of the first part, the said New Brunswick Company, the said Goodyear Company and the said Hartshorn & Co. of the second part, the said Judson of the third part, and the Malden Manufacturing Company, a Corporation chartered by the laws of Massachusetts of the fourth part, witnesses:

First.—That the said parties of the first part, by and with the consent of the parties of the second part, in consideration of the sum of one hundred thousand dollars to the first and second part paid by the party of the fourth part, the receipt whereof is hereby acknowledged by the said parties, and in further consideration of the payments and stipulations herein provided to be paid and performed by the party of the fourth part, do hereby give and grant unto the said Malden Manufacturing Company, their successors and assigns, a full and absolute license to manufacture and vend India Rubber Boots and Shoes, and for that purpose to use any and all of said Goodyear's preparations of India Rubber and improvements in the preparation of India Rubber for manufacturing boots and shoes of all kinds, for and during the unexpired term or terms of all patents issued to the said Goodyear, bearing any date whatever, for and during the unexpired term or terms of any other patent, patents or renewal thereof, owned by him, the said Goodyear, or in which he may have an interest, issued or to be issued, and this license is to extend to all said Goodyear's future improvements and preparations of India Rubber, whether patented or not.

Second.—The said parties of the first part for themselves, their successors and assigns, hereby covenant and agree to and with the said party of the fourth part, their successors and assigns, that they will not grant to any other person or company whatsoever any license to make, use or vend the said preparations or

improvements in the preparation of India Rubber for the manufacture of India Rubber boots and shoes during the continuance of this license, except a license to J. A. Dorr.

Third.—The said William Judson party of the third part hereby gives and grants unto the said Malden Manufacturing Company, their successors and assigns, a full and absolute license to use the said Chaffee patent in the manufacture of India Rubber boots and shoes, and hereby gives his consent to their using said patents as aforesaid.

Fourth.—The said parties of the first part for themselves, their successors and assigns, further covenant and agree to and with the said party of the fourth part, and their successors and assigns, that they will at their own cost and expense prosecute with all reasonable despatch, and carry on to final judgment a sufficient number of suits against violations of the said Goodyear's patent so far as the same relate to the manufacture of India Rubber boots and shoes, and that they will continue to do so until the patents are set aside in the highest Court to which they can be carried.

Fifth.—The said parties of the first part, for themselves, their successors and assigns, further covenant and agree to and with the said party of the fourth part, their successors and assigns, that they will fully do and perform during the continuance of this license, all the covenants, agreements, and stipulations to be by them kept and performed, and contained in two agreements made on the 1st day of July, A. D. 1842, the first being an agreement between the said Goodyear and the said parties, and the second an agreement between themselves.

Sixth.—The said parties of the second part hereby consent and agree to the granting of this license to the said party of the fourth part, and they further consent and agree to and with the said party that they will not consent to the granting of a license to any other party.

Seventh.—The said party of the fourth part for themselves, their successors and assigns, in consideration of the premises, hereby covenant and agree to and with the said parties of the first and second parts, that they will pay to Leverett Candee, or to such other trustee as may be appointed in his stead by any instrument in writing signed by a majority of the parties of the first and second parts, semi-annually, three cents, and to Charles Goodyear one half of one cent on each and every pair of boots and shoes, &c., as aforesaid manufactured by them, but if any of said boots and shoes are not merchantable and are destroyed, then no tariff shall be paid thereon, such tariff to commence and be computed from the date thereof.

Eighth.—The said party of the fourth part further covenants and agrees, and with the said parties of the first and second parts, that they will keep true and correct accounts and books, shewing the number of boots and shoes, &c., as aforesaid manufactured by them, and showing the amounts to be paid to the said trustee, as well as to the said Goodyear, truly and fully, which accounts and books shall at all times that are reasonable be open to the inspection of the said parties of the first and second parts and their trustees. That they will stamp with the words "Goodyear's patent" and with their own name all boots and shoes manufactured and sold by them as aforesaid, showing that they are the manufacturers thereof. That in case they should sell, assign, or transfer to any person or Company the license hereby granted, they will in every such sale, transfer or assignment, insert an agreement on the part of every such purchaser that such purchaser will comply with all the terms, conditions and stipulations which the said party of the fourth part are bound by this instrument to observe and perform, but said parties of the fourth part shall not be held responsible for the fulfillment on the part of any such purchaser of any such stipulation or agreement. All the India Rubber boots and shoes manufactured during the continuance of this license by the said party of the fourth part, shall be deemed and taken to be made under it and paid for accordingly. The said tariff shall be paid, notwithstanding any of the foregoing stipulations, until the patents of the said Goodyear are declared void by the highest court to which they can be carried. All the provisions, rules and regulations which

have heretofore been made, or which may hereafter be made for regulating the sale and prices of India Rubber boots and shoes, shall be binding on the said party of the fourth part to the same extent to which they bind the other licensees.

The same provisions in this behalf being applicable to the said party of the fourth part that are applicable to said Hartshorn & Co.

Ninth—The tariff to be paid to said trustee by said party of the fourth part, under the provisions of the seventh article hereof, shall be appropriated by the trustee on the principles set forth in the license granted to the said Hartshorn & Co., and under which they are now acting; provided, however, that after the payment of the portion of the tariffs due to the parties of the second part, one half part of the balance thereof, shall be applied to pay the costs and expenses of extending said Chaffee's patent, and of any litigations and disputes which may grow out of said patent in sustaining or defending the same, and such prosecutions shall be commenced within a reasonable time after such infringements come to the knowledge of the parties of the first and second parts, and the same shall be prosecuted to final judgment with all reasonable dispatch.

Tenth—It is further agreed by and between the said parties of the first, second and third parts, that nothing herein contained shall affect any rights or contracts between said parties not specified in this license.

In witness whereof said parties have executed these presents, the day and year first above written.

LEVERETT, CANDEE & Co.

L. CANDEE, Pres't.

HAYWARD RUBBER Co.

WM. A. BUCKINGHAM, Pres't. of
the Newark India Rubber Mfg. Co.
subject to the approval of their
board by ABM. COLES, Treas.

FORD & Co.

JOHNSON LETSON, Pres't. of the
New Brunswick Rubber Co.

GOODYEAR'S I. R. Shoe Co. by
S. J. LEWIS, Pres't.

HARTSHORN & Co.

WILLIAM JUDSON,

Malden Manufac. Co. by their Pres't.

GARDINER G. HUBBARD.

Executed in Presence of

T. O. WALES,

WARREN ACKERMAN.

New York, Nov. 1st, 1851.

Mr. EDWIN M. CHAPMAN,

Dear Sir:—It is important, I am aware, for your interest as you suggest in your letter, that the payments due you from me should be so secured that creditors cannot seize it in my hands—your letter making this request I appreciate the importance of. It would have been answered sooner, but from the pressure of business engagements was temporarily laid aside and forgotten. The conveyance can also be modified to meet your wishes—a draft for that purpose was made at the time you were last in New York at your request, according to your views—I shall be disengaged on Monday and Tuesday and Wednesday, after which I may be absent from the city. If you will come on Tuesday next, 4th March, I will settle these matters, so that you can go back the same day. I shall send telegraph to you on Monday, unless I get one from

you, requesting an answer whether you will be here on Tuesday, so that I may not be kept waiting for you, in case engagements should call me out of the city, to which I am liable every moment.

Yours truly,

WILLIAM JUDSON.

New York, Dec. 25th, 1850.

Mr. E. M. CHAFFEE,

My Dear Sir—I am without any justification for not sooner writing you, but I have as a slight excuse to offer, that I have been laid up for the past three or four days with sickness.

I am now attending to your matter, and will have the funds ready for you in the course of a few days; you are aware that I have been pressed hard in business for the last two or three months, but I do not mean that you shall be any longer put off, or have any cause for complaint.

You will hear from me again in a day or two.

Yours truly,

WILLIAM JUDSON.

PROVIDENCE, R. I., July 1st, 1853.

To Messrs. HARTSHORN & Co.,
Providence.

You are hereby notified that William Judson has no authority to act as my attorney, or to give any licenses for the use of my patent, for improvement in the manufacture of India rubber, originally dated August 31, 1833, and extended August 31, 1850, for a further term of seven years, and that I recognize no acts of his as binding on me, and that I am under no obligation to ratify any thing that he has done in my name.

Signed yours,

E. M. CHAFFEE.

Affidavit of GEORGE A. BILLINGS, that he on the 2d of July, delivered original to Hartshorn—filed, copy in full form.

NAUGATUCK, Sept. 9th, 1850.

Mr. CHARLES GOODYEAR,

Dr. Sir—Before I left New York, I was requested by the lawyers to make them trustees of the extension for the benefit of yourself and your licensees, but I objected doing so until I had seen you, and for that purpose I avoided seeing Mr. Judson the next day, and when I got home I thought I should have plenty of time to see you, not at all expecting Mr. Judson to follow me to N. H., as he did. He represented that it was according to the understanding of all parties, that he should have the extension in trust, which I at last granted, being firmly persuaded that that must be the result at last, for I do not believe that the expenses of the extension would have been adjusted on any other terms.

I preferred that Mr. Judson should break the subject to you, or I should have mentioned it before.

Respectfully yours,

E. M. CHAFFEE.

New Haven, Sept. 14th, 1850.

Mr. Wm. Judson,

Dear Sir—I hardly expected that the arrangement which I made with you would be so repugnant to Mr. C. G., as to induce him to dispense with my assistance, particularly after the assurances which were made, that said arrangement would be agreeable to the understanding of all parties, but such is the fact, and I am without business or employment, and I do not know where else to look for business except to you. Please let me hear from you soon in regard to it, for I cannot afford to be long idle, and besides I have claims to settle immediately, and it will be necessary for me to have the advance of \$1,500, stipulated for.

Please do not forget when the papers are redrawn, that the use of the invention and improvements in any of my business I may carry on, is to revert to my heirs, executors, and assigns at my death, and also that the consideration in the agreement is to be \$1,500 per annum, instead of \$1,250, and that particularly to revert to my heirs, executors and assigns—and the advance of \$1,500 should have been embodied in the instrument, as Mr. Woodman very well knows that that was upon it I particularly specified a larger amount.

Yours truly,

E. M. CHAFFEE, No. 51 John-St., N. H.

Sept. 6th, 1850.

Mr. Candee,

Dear Sir—I wish to call your attention to the instrument executed last night. Mr. Judson claims to have furnished personally and privately, all the lead for procuring the extension; and if so, is he not entitled to the extension instead of the licensees—and, also, does not that instrument bear the following construction, viz.: that no one but himself has the controlling influence on power, respecting the patent in question, not even the licensees?

Yours respectfully,

E. M. CHAFFEE.

P. S. I make these suggestions more on your account, than my own.

E. M. C.

NEW YORK, Sept. 16th, 1850.

Mr. E. M. Chaffee,

My Dear Sir—Yours of the 14th inst., is received. As to the amount per annum agreed to be paid you, my recollections, and I have no doubt Mr. Woodman, Mr. Candee and yourself will agree with me on a moment's reflection, that I should endeavor to make such an arrangement with the shoe men; as to be able to increase the amount agreed to be paid from twelve to fifteen hundred dollars per annum. I have not been able to bring this matter before them since I saw you last; but, as you appear to feel some anxiety about the matter, I will now give you my assurance that whether the proposition meets the wishes of the shoe men or not, and in any event, I will pay you fifteen hundred dollars per annum quarterly, instead of twelve hundred as provided in our agreement. I regret what has been done does not meet the approval of Mr. Goodyear, as it was done for his benefit, as well as my own and that of the shoe men and such others as may contribute their proper proportion of the expenses, &c., attending the proceedings to procure the extension of the patent, and to prosecute infringements upon the same. Of one thing I am quite certain, that if what I have done benefits myself and the shoe men at all, it must benefit Mr. Goodyear, and "vice versa." However, it is my belief that Mr. Goodyear will change his present views of the matter. I trust you will give yourself no apprehension in regard to employment, and however disagreeable it may be to you to remain in the employment of Mr. Goodyear, while he is dissatisfied with what you have done, restrain your

feelings for the present, remembering that Mr. Goodyear has been to you an excellent and steadfast friend, and place as much reliance as possible upon my judgment, that all will be right in the end, and that whatever temporary inconvenience you may suffer, your best interests and those of Mr. Goodyear have been subserved by what you have done. Give yourself no uneasiness in regard to the points which you desire should be distinctly provided for in the contract. Mr. Candee will be here on Wednesday next, and on his return will see you and arrange with you in regard to the payment of the fifteen hundred dollars as agreed between us. My best regards to your wife and family.

Yours truly,

WM. JUDSON.

NEW HAVEN, 2d July, 1852.

E. M. CHAFFEE, Esq.,

Dear Sir:

Your favor of the 28th inst. was duly received. There will be a meeting of the associates in New York next Thursday, 8th inst., when I shall present the subject of your letter to the meeting, after which will communicate with you.

Respectfully, Your obedient,

LEVERETT CANDER.

[TELEGRAPH.]

PROVIDENCE, June 28th, 1852.

To WM. JUDSON,

Mr. Day is here and will give me Twenty-five Thousand Dollars for my patent. You have the preference at the same price. Will delay closing, if possible, waiting your answer by telegraph.

E. M. CHAFFEE.

PROVIDENCE, June 28th, 1852.

Mr. LEVERETT CANDER,

Dear Sir:

If those propositions which were made me at New York are confirmed by you, they will induce me to stand neutral, and at the same time to exert what influence I may, judiciously, to bring about the close of our business. If I should exhibit any disposition at present to favor you, it might be prejudicial rather than otherwise; but yet when it becomes necessary I will take such measures as will accomplish the object. I understand the propositions to be these—that my pay would be doubled for my machine patent, and that the obligation which Mr. G. gave us was to be cancelled, and that we should be allowed to dispose of our manufactured and unmanufactured goods, besides which it will be important to us to complete the sales which are in arrears.

Please let me hear from you soon.

E. M. CHAFFEE.

PROVIDENCE, July 12th, 1852.

Mr. LEVERETT CANDER, Esq.,

Dear Sir:—In answer to yours of the 10th inst. which was this day received, I have to say that I know of no reason why I cannot be in New Haven on Wednesday next, and you may therefore expect me.

Respectfully yours,

E. M. CHAFFEE.

Mr. E. M. CHAFFEE,

NEW HAVEN, July 10th, 1859.

Dear Sir: Agreeably to my promise I now write to inform you that yesterday the subject of Bourn and Brown was brought before the meeting, and it was decided that an early action be adopted to prevent infringements by them.

I have therefore to request you, if you can, to call on me, say on Wednesday of next week, (say 14th inst.) Please inform me by return mail—if I can expect you; if not on that day, please state what day next week you can come.

Respectfully, L. CANDEE,

Mr. LEVERETT CANDEE,

PROVIDENCE, Aug. 25th, 1859.

Dear Sir:—The only thing necessary to the attainment of your wishes, in relation to the matter in hand, is to convince parties that you are in earnest—which no one but yourself or the licensees can do, unless possibly your personal influence might accomplish it. Any effectual influence which I might exert at this time would probably tend to confirm the present course of things, and subject me besides to considerable sacrifice.

E. M. CHAFFEE.

Mr. EDWIN M. CHAFFEE,

NEW YORK, June 20th, 1860.

Dear Sir:—You seem not to have appreciated the feelings which prompted me to withhold temporarily the quarterly payments due you. You were told that the object was to induce you to withdraw from Bourn & Brown, and to cease from infringing the patents of Goodyear, and that there would be no disposition to inflict punishment on you for the past infringements in case you should at once withdraw from Bourn & Brown, as it was expected from what you said you would do, in which event you well knew you would be paid the arrears due on the contract, and be excused for past infringements; but I have abandoned all hope that you will cease your connexion with Bourn & Brown, or cease infringing the patents of Goodyear, till compelled to do so. I have therefore concluded to treat you and Bourn & Brown alike, and shall therefore pay the arrears due on the contract. You will therefore please draw on me at sight for the quarter's rent in arrears.

Yours truly,

WM. JUDSON.

WM. JUDSON, Esq.,

PROVIDENCE, June 27th, 1858.

Sir:—In reply to the communication which you have recently seen fit to send me, I would say that I have laid all the matters relating to my patent, as well as the matters involved in the suit, which you have recently seen fit to commence against me, to my legal advisers, and when I have received their opinion upon the questions submitted to them, I shall be prepared to act according to my rights. In the meantime I would say that I do not recognize any claim on your part under agreements which you have long since formally and distinctly repudiated.

Respectfully yours,

E. M. CHAFFEE.

P. S.—Mr. Jenckes, my legal adviser, will be at the Astor House to-morrow, if you wish to see him.

E. M. CHAFFEE, Esq.,

NEW HAVEN, 16th Feb., 1858.

Dear Sir:—Your favor of 14 is received. I must refer you to Judson & Hayward, as I have had no part in the negotiation between you. As to your right in the machine, I suppose it is about half run out, and by the time a decision could be had, the Patent would expire. Since its extension, every one who wished has had undisturbed possession.

Your obedient servant,

L. CANDEE.

L.

PROVIDENCE, Feb. 14th, 1853.

Mr. LEVERETT CANDER,

Dear Sir:—I wrote Mr. Judson on the 28th of January to know if I could see him on the 31st, but not getting any answer, I called to see you a few days after, but you was absent. I have been and am still importuned in regard to my interest in the Machine Patent, and have declined good offers. When I last saw Mr. Judson, I offered to take the extra sum you and Hayward first proposed, but he offered only half that sum. Yet Mr. Hayward proposed that the whole sum of \$1,000 extra, should be made up; but as it does not stand in a shape hardly to be relied upon, therefore I write to you in relation to it. I can do as well as that otherwheres. I think it cannot be expected that I should move in the matter until I have something more than a verbal offer.

E. M. CHAFFEE.

PROVIDENCE, Jan. 5, 1853.

WM. JUDSON, Esq.,

Dear Sir:—I am ready to take the steps which you suggested if I can be sustained during the proceedings, without which, it seems to me to be useless; for I should be nearly powerless to effect any thing and sustain myself. Whether you will be willing to hazard any pecuniary interest upon the success of the project, remains for you to say; for my own part, I do not know why it will not succeed—indeed I think it will.

I understand you are to be here next Friday, when I will consult with you about it, and in the meantime I shall consult some lawyers here.

E. M. CHAFFEE.

NEW YORK, Sept. 23d, 1852.

E. M. CHAFFEE, Esq.;

In view of what has occurred since our conversations with you, we deem it right to withdraw, and we do hereby withdraw all and every proposition touching the matter relating to the conversations and propositions aforesaid.

Yours respectfully,

L. CANDER,
NATHANIEL HAYWARD.

NEW HAVEN, 10th June, 1852.

E. M. CHAFFEE, Esq.,

Dear Sir:

I am in receipt of your letter of 15th inst., and regret exceedingly the course you have seen fit to pursue in relation to the manufacture of rubber shoes.

You must have known that Mr. Goodyear had disposed of all his right, title and interest in the shoe branch, and that he has no control or authority in the matter, and that he cannot, if disposed, protect you or any one in that manufacture; but further, I have called on Goodyear to explain the relation existing between him and Bourn and Brown, and I find in the contract entered into between them, that he only stipulated to provide for them a license if possible, and in case he cannot obtain such a license within one year, then he is, in consideration of that and other matters, to pay the five thousand dollars.

Now if you are operating under such an article, I think you will find that you are on untenable grounds.

Now look at this thing, and at your operations. You have, as I am informed, an agent at the West, showing samples of your shoes, and offering Misses' shoes at 87½ cents, women's at 55 cents, and men's at 80 cents. Can you expect that the parties interested will assent to this thing, however much they may be disposed to favor you? Yet I am persuaded that you cannot be permitted to continue this business unless you can be sustained by law.

(Signed)

Yours, &c.,

I. CANDLER.

New York, Aug. 16th, 1853.

Mr. E. M. CHAFFIN,

Sir:—I have some claims in my hands in favor of the Naugatuck Ind. Rubber Co., in which you are interested, and concerning which I wish to see you. I am sorry that when you was en route to see Judson, you did not see me. I was informed that you called at the office, but I was not in, and the clerk did not know certainly who it was that called, but from his description I thought that it was you. I wish to see you also, in relation to my compensation for the services I rendered in obtaining the extension of your patent, which I understand you lately sold to H. H. Day. I have never been paid. Judson has for six or eight months chosen to separate himself and Mr. G's concerns as far as practicable from me, acts without my advice entirely, and appears very unfriendly to me, I suppose because I cannot favor his views and conduct in relation to the G's patents &c. I should like to see you before I leave for the West, which will be next Monday, and shall be absent, say, twelve or fifteen days. If you can come on before I leave, please write to me.

Your friend, &c.,

S. R. STAPLES,

142 Broadway.

New Haven, June 8th, 1853.

Mr. E. M. CHAFFIN,

Sir:—I hope you are not so situated with Bourn and Brown, as to be implicated in their piracy on the Shoe Interest.

I understood they are making five or six hundred pairs per day, without authority from the owners of the shoe right.

If they are calculating on any protection in this business from any persons other than those interested in the shoe right, they will find themselves mistaken. I have seen the contract between them and Goodyear, and it does not give them any right to manufacture shoes, and I have no doubt that Goodyear will fulfil that agreement so far as it is binding on him.

Will you inform me how you are situated. If you are partners with them, and under what claim or right they assume in justification of their course,—your answer will particularly oblige,

Your Obedt.,

LEVERETT CANDLER.

Providence, June, 15, 1853.

Mr. LEVERETT CANDLER.

Sir:—I ought, perhaps, to make some apology for not answering your letter sooner, but as it is a subject which comes to me some with particular force, I hope you will excuse it.

When I left New Jersey and engaged with Mr. Goodyear, it was with the

expectation of soon having an interest in some branch of the rubber business, and he knows how anxious I was to get a small license for shoes.

I have always felt as if I had a claim for something more than a living out of the rubber business, and more particularly upon Mr. G., for it was on his account that I was induced to give up a good business, and I have no doubt but he has always intended to do as well by me as he could, but after having spent all my life as a sort of pioneer in some new business, I think he will not blame me if I have been very anxious to become fixed upon something permanent.

When I came here I made my arrangement permanent for a term of years, not having any doubt but it was Mr. G.'s intention to grant me a license, as I have been informed he could do, and because I could not alone do business, and furnish him with what he wanted. Other parties were admitted into the interest; but that ought not to be an objection to giving me a license, as some have pretended it was, for I could do nothing alone.

If Mr. G. sought the interest of any one in this matter but his own, it must have been mine, and I have always felt too much regard for his interest and patents to permit myself to impair them when it is possible to avoid it, and what has been done, has been done in the full faith that Mr. G. would grant or procure us a license:

E. M. CHAFFEE.

MR. WM. JUDEON, DEAR SIR:

I was about to write to you, when I heard that a meeting of the Licensees was to be held next day in New York, and I therefore concluded to wait patiently until it was over, supposing that the opportunity would be embraced by you to make the necessary arrangements to pay me; but much to my surprise, I learned on Mr. Candee's return that my matters had not been spoken of by you, or any one else, he supposed that you had attended to the matter according to your letter to me. Now that there are rich capitalists and manufacturing companies overflowing with money, who are willing and ready to do their part, it is scandalous that I should be neglected in this manner, particularly under the circumstances, thrown out of employment for three months and getting only partial payment from Mr. G. I assure you I cannot stand it in this manner much longer. I have had to put off bills from day to day, and I shall consider myself very fortunate if I can keep out of the hands of the Sheriff a week longer; indeed I can scarcely believe that it is not all a farce, on your part. Why, sir, Mr. Day would treat me with more consideration. Partial pay from Mr. G. and nothing from you, will not answer my purpose; it will not do for me to neglect other opportunities. Mr. G.'s experiments will not always last, and my arrangement with you cuts me off from all the promised assistance from him in the way of business, and it is for such reasons that I have placed my reliance upon you, which I hope I may never regret.

With respect, Yours,
E. M. CHAFFEE.

PROVIDENCE, Sept. 28th, 1852.

LEWIS C. CANDER, Esq.

SIR: On my arrival home from East Hampton, I found a letter from you withdrawing certain propositions, but without any reason or explanation given, except an allusion to something which has occurred; and what that is, I cannot make out; as things now stand, I hardly know whether to be glad or sorry. Those propositions I supposed I could depend upon, and was looking forward to the accomplishment of your desires; therefore I am disappointed; and your withdrawal would have been rather serious and summary, if I was farther advanced in my plans; as it is I fear I shall not escape exposure and censure. I am already suspected of too much leaning in your favor, which may

prejudice my interests here. I think you were too well assured of my disposition to co-operate to charge me with delinquency, yet, on the other hand, I had reason to expect that some more effective and indispensable argument which I hinted at in my last letter, would be resorted to on your part, but I will not do you the injustice to believe that you have taken advantage of hints, to relieve yourselves of those propositions under the impression perhaps derived from that hint, that you can dispense with my services; for it lies with me after all, to decide the matter. I am however predisposed to believe that the unlooked for course which our business has taken is the cause of your withdrawal; and under this impression I will hope that you have thought it best for me to continue in this course. I think, however, that your withdrawal needs some explanation which will be thankfully received.

Yours Respectfully,

E. M. CHAFFEE.

MEMORANDUM OF AGREEMENT BETWEEN CHARLES GOODYEAR AND WILLIAM JUDSON.

It is hereby understood and agreed between Charles Goodyear and William Judson, that there shall exist between them a joint and equal right title and interest in and to all sums of money, bonuses, tariffs, dues, assessments of profits, which may arise or accrue from the manufacture or sale of suspenders of any kind, under any of the patent right inventions or improvements of the said Charles Goodyear's, present or future, or under any patent rights or inventions or improvements which he may purchase or become interested in. And the said Charles Goodyear in consideration of one dollar, hath conveyed, and does hereby convey to the said Judson, the equal undivided half part of said interest, and the parties hereto mutually covenant and agree that they will not sell, assign or convey the whole or any part of their said rights or interests without the consent of the other in writing first had and obtained, or grant any right, license or authority to any person or company to manufacture or vend suspenders of any kind, without the consent of the other in writing first had and obtained.

In witness whereof, the parties hereto have hereunto set their hands and seal, this twentieth day of November, one thousand eight hundred and forty-six.

Signed sealed and delivered) WILLIAM JUDSON, [seal.]
in the presence of)
SAMUEL BROOKS.) CHARLES GOODYEAR. [seal.]

(Recd. and Record., Dec., 28, 1846.)

THE UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office.

In testimony whereof, I, Charles Mason, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this seventeenth day of September, in the year of our Lord one thousand eight hundred and fifty three, and of the Independence of the United States the seventy-eighth.

CHARLES MASON. [L. S.]

In consideration of one dollar to me paid, and of other valuable considerations received of Leverett Candee, the Hayward Rubber Co., Ford & Co. and

the Newark India Rubber Manufacturing Company, I hereby agree to execute formal grants or licenses to each of the aforesaid parties of the right to use the improvements secured by letters patent to Edwin M. Chaffee, for dispensing with the use of solvents in the preparation and manufacture of India Rubber, or Caoutchouc, which patent has been extended for seven years from the expiration of the same. The title to which patent, as extended, is now vested in me, and said grants shall be made out and executed, and delivered to the parties above-named, on or before the first day of June next. Dated May 25, 1853.

WILLIAM JUDSON.

Witness,

GARDNER G. HUBBARD.

Said Judson shall also agree in said grant, or license, that he will not grant a license to any other parties to manufacture India Rubber boots and shoes by the use of said improvements, except to the licensees under the aforesaid parties, or those who may have a right to manufacture boots and shoes under Goodyear's patent.

WILLIAM JUDSON.

Witness,

GARDNER G. HUBBARD.

Received and recorded July 11, 1853. Ex'd., A. B. L.

COMMONWEALTH OF MASSACHUSETTS,
SUFFOLK, ss.

In the matter of the application of Edwin M. Chaffee for an extension of his patent, granted to him and dated August 31st, A. D. 1834:—

On this seventeenth day of August, A. D. 1850, the within named deponent appeared before me at the office of David A. Simmons, Esq., in Boston, and being by me first cautioned and sworn to tell the truth, the whole truth, and nothing but the truth relative to the matters contained in this deposition, made the following statement and signed the same. He was then duly cross-examined as herein stated and signed the same. This deposition was taken before me on the notice hereto annexed at the request of said Chaffee's counsel, Wm. Judson, Esq., to be used at the hearing of his petition for the extension of his aforesaid patent.

GEORGE W. COOLEY,

Justice of the Peace.

I, John Haskins, of Roxbury, in the county of Norfolk and Commonwealth of Massachusetts, on oath, depose and say that I am now forty-seven years of age, that I am familiar with the India-rubber business, and have been since the year of our Lord, one thousand eight hundred and thirty-two. Since the year A. D. 1838, I have been engaged in the manufacture of India-rubber goods. I was a stockholder in the "Roxbury India-Rubber Factory" from its commencement in A. D. 1838, till the time its affairs were closed in A. D. 1837. I became acquainted with Edwin M. Chaffee in A. D. 1828, or in A. D. 1829, and have known him ever since. Mr. Chaffee is a man of excellent moral character, very industrious, a very ingenious mechanic, and a man of considerable scientific attainment.

Mr. Chaffee has a family consisting of a wife and several children; he is without means of support for himself and his family other than his daily labor.

Mr. Chaffee invented the method or process of preparing or manufacturing India rubber goods, by grinding the rubber or running it through rollers so as to avoid and save the use of turpentine and other solvents, and at the same time accomplish a great saving of labor.

Mr. Chaffee invented and obtained a patent for the "Monster Machine," so called, under the laws of the United States. Said machine was used by the "Roxbury India Rubber Factory," and was found in its practical operation to be a very great improvement over any previous method of manufacture.

By the improved method of manufacture, invented by Mr. Chaffee, there was a saving in these particulars, viz.:

By his method of manufacture all solvents were dispensed with. This dispensing with solvents, saved to the "Roxbury India Rubber Factory" from thirty to forty thousand dollars per annum; and by his method of manufacture there was also a saving equal to one half of the amount of labor employed in the old process of manufacture. By the old process of manufacture it was necessary to run on from four to eight, and ten, coats of dissolved rubber according to the thickness of the coat or sheet; and after each coating it was necessary that the cloth should lay exposed to the air for a considerable time to evaporate the solvent, before another coat could be applied to the unfinished fabric, or before the finished fabric could be rolled up. This caused great delay in the work at all times. By Mr. Chaffee's process, only from one, to three or four coats of rubber were required for coats or sheets of similar thickness, and such coat could be applied immediately after the prior one, because no solvents were used in the process; and the fabric when finished could be at once rolled up, for the same reason. The "Roxbury India rubber factory" purchased of Mr. Chaffee, his entire interest in the patent, granted to him for said invention, under the laws of the United States, and an assignment thereof was made to said company by Mr. Chaffee. The company in consideration of such assignment, and of his personal services to be exclusively devoted to said company, for a period of ten years, from March 23d A. D. 1835, agreed with said Chaffee to pay him an annual salary of fifteen hundred dollars, during said term of ten years, payable quarterly, and a further sum of one thousand dollars annually, during said term of ten years, payable quarterly; but said latter sum of one thousand dollars was to be paid upon the condition, that said company should derive from said invention certain advantages, which it was supposed would accrue therefrom to said company, and if the advantages derived from said invention should be less than were supposed, then a proportional deduction was to be made from said annual sums of one thousand dollars. The salary of fifteen hundred dollars annually, was to be paid to Mr. Chaffee, for his personal services, as I understood it.

On the 23d of March, A. D. 1835, Mr. Chaffee entered upon, and into the service of the said company, in pursuance of said agreement, and remained in their service about three years, and received from said company, on account of his personal services, and for his inventions and said patent, about six thousand dollars. The value of said invention, as shown in its practical application, far exceeded the expectations of the company. All the goods made by the "Monster Machine" were good, and gave entire satisfaction at that time.

I consider the invention of Mr. Chaffee as very valuable, and of great public utility.

Samuel T. Armstrong was the agent of said company, for two or three years. He entered into the service of said company, in the year A. D. 1836,—if he was a stockholder, it was, as I believe, to a very small amount.

I have examined with care, and compared with the original, the paper hereto annexed, marked C, and found it a true copy in all respects of a contract between said company and said Chaffee.

John A. Dorr, the president of said company, and Israel Martin one of the subscribing witnesses, whose names appear on said contract have both deceased. I know their signatures, and their signatures appearing on the original contract are genuine. George Gay, whose name also appears on said contract, has deceased. I knew his signature, and that appearing on the original memorandum indorsed on said contract is genuine.

I know the signature of Edwin M. Chaffee, and that of his name appearing on the original of said paper are genuine.

JOHN HASKINS,

The above named deponent having made and signed the above statement, is now by Mr. Smales cross examined, said Smales appearing as the counsel for Henry Newell, of the city of New York.

1st. What was Mr. Chaffee's business when you first knew him in 1828 or 1829?

Answer. He worked for me in the patent leather business.

2d. When was he first engaged in the India rubber business?

Answer. He commenced experimenting in the year 1831, in Roxbury, in his own house.

3d. When did he first engage in an India rubber establishment?

Answer. I think it was in the year 1832, Mr. Baldwin and myself commenced the business with him in a small building in Roxbury.

4th. What was the nature of the goods manufactured?

Answer. We merely made samples there.

5th. Were they made by machinery or by hand?

Answer. He had a small cheap machine to spread the cloth with. It was a very simple spreading machine. It could hardly be called a machine.

6th. What was his next engagement in this business?

Answer. His next engagement was, a small company was formed with a capital of \$30,000—but we commenced with \$15,000, and built the first factory, and Mr. Chaffee was one of the company, which was the beginning of the Roxbury India Rubber Company. This company commenced in 1833.

7th. Were you at that time familiar with the process used in other India rubber factories?

Answer. I was not familiar with them, because I had never been in any other, and hence only understood from common report.

8th. How do you know that Chaffee was the original inventor of the method or process of preparing India rubber goods without the solvent?

Answer. Because I never heard of its being used before his invention, and because I was with him at that time, and daily at that time, and felt equally interested and astonished at his thinking that he could do so. I knew that he commenced by a series of experiments with what means he had at that time, and it resulted in his satisfying the company that he could do so, and then made the contract that is annexed to my deposition.

9th. When were those experiments made?

Answer. They were made in the year 1834 secretly, and the early part of 1835, at Roxbury, in the company's factory.

10th. At whose expense were they made?

Answer. At the Roxbury India Rubber Company's expense. Chaffee was under a salary from the company during all the time.

Eleventh. What peculiar novelty is there in the monster machine which leads you to call it the invention of Mr. Chaffee?

Answer. Because it is a machine that I know was constructed for India Rubber and for no other purpose.

Twelfth. Is any new mechanical principle involved or brought to practice in that machine?

Answer. It is a combination of massive rolls heated by steam, some going fast and some slow, that produced the effect; and massive frame-work in connection with it.

Thirteenth. Were any of these things mechanical novelties at that time?

Answer. I considered this machine for that purpose a very great novelty. I am not sufficiently versed in mechanics to answer this more fully.

Fourteenth. Who assisted Mr. Chaffee in getting up the machine and preparing the models?

Answer. Mr. Sawyer, who is now dead, and Mr. Scott was the other.

Fifteenth. By whom were they paid?

Answer. They were paid by the Roxbury India Rubber Company.

Sixteenth. Was Mr. Chaffee at this time, or had he been before a machinist by profession?

Answer. No, sir, I believe not. He was an ingenious man and an inventor, with a good share of scientific knowledge.

Seventeenth. What were the nature of his experiments?

Answer. Those were experiments with small samples of cloth. They being done in secrecy, I cannot say how they were done.

Eighteenth. When did Mr. Chaffee leave the service of the Company?

Answer. I believe he left in the early part of 1838.

Nineteenth. Were you an officer of the Company at that time?

Answer. I was not, but I was interested—had a large number of shares.

Twentieth. Were you present at the settlement made on behalf of the Company with Mr. Chaffee?

Answer. No, sir.

Twenty-first. Do you know that \$3,000 was all he received from the Company after 1835?

Answer. I believe that is the fact from his account in the books of the Company and from what I heard from him at the time.

Twenty-second. Were not large sums paid from the funds of the company to other persons on his account?

Answer. Not that I am aware of.

JOHN HASKINS.

To HENRY NEWELL:

You are hereby notified that depositions will be taken in Boston, at the office of Simmons & Keith, No. 20 Court street, before persons authorized to take depositions, on the 16th day of August instant, at nine o'clock in the morning, which examination of such witnesses as may appear will be continued till all the witnesses have been examined, and the testimony closed, which testimony is to be used in the application of Edwin M. Chaffee, for the extension of his patent, dated 31st August, 1836.

WILLIAM JUDSON, for

EDWIN M. CHAFFEE.

New York, August 16th, 1850.

In the matter of the application of Edwin M. Chaffee, for the extension of patent, granted to him August 31, 1836.

COMMONWEALTH OF MASSACHUSETTS,
Suffolk County, ss.
August 17th, A. D. 1850.

William Judson, of the City of New York, being duly sworn, deposes and says, that on the 14th day of August, A. D. 1850, he served upon Mr. Smales, the counsel for Henry Newell a notice, who agreed to accept the same for said Newell, in presence of H. H. Day, of which the annexed foregoing is a true copy—and further deponent saith not.

WILLIAM JUDSON.

COMMONWEALTH OF MASSACHUSETTS,
Suffolk County, ss.
Boston, August 17th, 1850.

There personally appeared, the above named William Judson, and made solemn oath, that the above affidavit by him subscribed was true.

Before me,

GEORGE M. COOLEY, Justice of the Peace.

COMMONWEALTH OF MASSACHUSETTS.

In the year of our Lord one thousand eight hundred and thirty-three.

An Act to incorporate the Roxbury India Rubber Factory.

Sec. 1st. Be it enacted by the Senate and House of Representatives in General court assembled, and by the authority of the same: That Lemuel Blake, Luke Baldwin, Edwin M. Chaffee and Charles Davis jr., together with such other persons as may become associates with them, their successors and assigns, be, and they hereby are created a body corporate, by the name of the Roxbury India Rubber Factory, for the purpose of manufacturing at Roxbury in the County of Norfolk, India Rubber Cloth and Leather and other India Rubber goods, and for this purpose shall have all the powers and privileges, and shall be subject to all the duties and requirements contained and provided in and by Act passed on the twenty-third day of February, in the year of Our Lord one thousand eight hundred and thirty, entitled, "An Act defining the general powers and duties of manufacturing Corporations."

Sec. 2d. Be it further enacted, That the said Corporation may take and hold such real estate at said Roxbury not exceeding in value the sum of five thousand dollars, and such personal estate, not exceeding in value twenty-five thousand dollars, as may be suitable for carrying on the manufacture aforesaid.

House of Representatives, Feb. 9th, 1833.

Passed to be enacted,

W. R. CALHOUN, Speaker.

In Senate, Feb. 11th, 1833.

Passed to be enacted,

B. T. FROGMAN, President.

February 11th, 1833.

Approved,

LEVI LINCOLN,

Secretary of the Senate.

Boston, August 14th, 1830.

I certify the foregoing to be a true copy of the original act.

[L. s.]

WM. B. CHANDLER,

Secretary of the Commonwealth.

**CERTIFICATE OF FORMATION OF THE NEW ENGLAND CAR.
SPRING COMPANY.**

KNOW ALL MEN by these Presents, that we, the undersigned, have formed and do hereby form a body, politic and corporate, under and pursuant to the provisions of the Act of the Legislature of the State of New York, entitled, "An Act to authorize the formation of Corporations for Manufacturing, Mining, Mechanical or Chemical purposes," passed February seventeenth, in the year one thousand seven hundred and forty-eight, and we so hereby certify and declare,

FIRST. That the corporate name of said Company is "The New England Car Spring Company."

SECOND. That the objects for which the said Company is formed, are the manufacturing and selling of Rail Road Car Springs and India Rubber goods, or articles of which India Rubber is a component part.

THIRD. That the amount of the Capital Stock of the said Company is Five Hundred Thousand Dollars.

FOURTH. That the term of the existence of said Company shall be fifty years from and ensuing the date of this certificate.

FIFTH. That the number of shares of which the said stock consists is Five Hundred.

SIXTH. That the number of Trustees of said Company is five, and the names of such Trustees who shall manage the concerns of said Company for the first year, are Charles Ely of the City of Brooklyn, State of New York; Fowler M. Ray, of the City of New York; George Merritt, of the City of New York; F. Morris Upham, of the City of New York; and William W. Ward, of the City of New York.

SEVENTH. That the operations of the said Company, are to be carried on in the City of New York.

In Testimony whereof, we have hereunto subscribed our names this ninth day of October, in the year of our Lord, one thousand eight hundred and fifty-one.

CHARLES ELY,
F. M. RAY,
GEO. MERRITT,
F. MORRIS UPHAM,
W. W. WARD.

STATE OF NEW YORK, }
CITY AND COUNTY OF NEW YORK, ss. }

On this ninth Day of October, in the year one thousand eight hundred and fifty-one, before me, personally, came Charles Ely, Fowler M. Ray, George Merritt, F. Morris Upham and William W. Ward; all known to me to be the individuals described in and who executed the foregoing Certificate, and severally acknowledged to me that they executed the same for the purposes therein mentioned.

MARCUS P. FERRIS, *Commr. of Deeds.*

STATE OF NEW YORK, }
CITY AND COUNTY OF NEW YORK, ss. }

I, George W. Riblet, Clerk of the City and County of New York, do hereby certify that Marcus P. Ferris, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument and thereon written, was at the time of taking such proof or acknowledgment, a Commissioner of Deeds for said City and County, dwelling in the said City, commissioned and sworn and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Commissioner, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed the seal of the said County the tenth day of October, 1851.

[L. S.]

GEORGE W. RIBLET, *Clerk.*

Endorsed.—Certificate of the formation of "The New England Car Spring Company" organized under the act of the 7th of February, 1848.

Filed 16th of October, 1851.

STATE OF NEW YORK, }
CITY AND COUNTY OF NEW YORK. }

I, Richard B. Connolly, Clerk of the City and County of New York, do hereby certify that I have compared the preceding with the original of a "Certificate of Incorporation" on file in my office, and that the same is a correct transcript therefrom and of the whole of such original.

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed my official seal this 26th day of May, A. D. 1854.

RICHARD B. CONNOLLY, *Clerk.*

[L. S.]

This instrument witnesseth, That Charles Goodyear of New Haven, in the State of Connecticut, for and in consideration of the sum of five thousand dollars to him paid before the delivery thereof by Charles Ely of New York, and Edward Crane of Boston, the receipt whereof is hereby acknowledged, doth hereby bargain, sell and convey to the said Ely and Crane jointly, and their representatives and assigns, the exclusive right except as hereinafter excepted, to manufacture, use and sell his, the said Goodyear's improved India Rubber, called vulcanized or sulphurized India Rubber, prepared by any of the processes patented by him, the said Goodyear, or by any processes which he may hereafter invent, to be used solely in the manufacture of springs for car fenders and locomotives, it being distinctly understood, however, that this license shall not be construed to include the application of said improved India Rubber to the manufacture of seats, sofas or cushions, or to the manufacture of hose or pipes, or to improvements in the machinery of the steam engine, the exclusive right as aforesaid, in and for the United States of America, except, however, that the said Charles Goodyear and his representatives shall at any time before the second day of May next, and until that day and no longer, continue to have and possess as ample as he now does, or did before the delivery thereof, the right to grant a right or license for the manufacture, use and sale of said sulphurized or vulcanized India Rubber in combination with or for Lewis's air spring as at present patented; provided, however, that said Goodyear shall not grant such right or license for the use of said sulphurized India rubber with said air spring for a less sum than two thousand dollars, and in case he shall so sell, the said amount of two thousand dollars shall be paid over and accounted for to the said Ely and Crane or their assigns; and the said Goodyear further covenants and agrees to and with the said Ely and Crane, that if at any time after the 15th day of June, and on or before the 2d day of July next, they or their assigns shall by any good and sufficient deed release, cancel, and annul the instrument, and demand of him or his representatives, a return of the consideration, or such part thereof as may have been actually paid as aforesaid, he the said Goodyear will forthwith repay to them all such sums so actually received by him, less whatever sum shall have been paid to them or their assigns for or on account of said right, or license, so granted as aforesaid to them in this instrument, and on account of said license for said air springs; and the said Ely and Crane do hereby jointly and severally covenant and agree, that in case of such cancelling and repayment as aforesaid, they and each of them and their assigns shall and will execute and deliver to the said Goodyear or his representatives their bonds, each in the liquidated amount of five thousand dollars, as liquidated damages; that they will not, each answering for himself, have or hold directly or indirectly any interest or concern in or with any manufacture or sale of springs to be used in or about cars, locomotives, engines or tenders manufactured from the said sulphurized India rubber, until the said Goodyear's letters patent granted in the year 1844 shall have been set aside and rendered null, or otherwise vacated by competent authority; they also promise and agree as aforesaid, that they and their assigns shall and will comply with the law of the United States as regards attaching to the springs which may be manufac-

tured by them the name of Charles Goodyear, patentee, of the date of his patent, namely the year 1844.

IN WITNESS whereof the parties hereto have hereunto set their hands and seals in the year of our Lord 1847.

Sealed, signed and delivered as to Charles Goodyear, at Jersey City on the 20th day of October, 1847, in the presence of
GEO. N. EDGE,
STEPHEN H. BLACKWELL.

CHARLES GOODYEAR. [L. s.]

As to Charles Ely at the City of New York, on the 27th day of October, 1847, in the presence of

CHARLES ELY. [t. s.]

GEO. V. NIKNOTH.

As to Edward Crane at the City of Boston, November, 1st,
T. UPHAM,
GEO. T. UPHAM.

EDWARD CRANE. [L. s.]

HENRY NEWELL and others, in the matter of opposition to the application of EDWIN M. CHAFFEE for an extension of the Letters Patent issued to him and dated the 31st day of August, 1856.

I, JOHN J. HOWE, of the town of Derby, in the State of Connecticut, being duly sworn, depose and say, that I am years of age and upwards, and am now President of the members and acting agent of the "Howe Fur Company." That in the year 1829 I commenced to manufacture India rubber goods in the State of New York, and constructed 2 machines to use therein, and that each of said machines had two rollers, the rollers of one were made of wood with smooth surfaces, and so that one roller was four times greater in diameter than the other, and geared together by cog-wheels of equal size, so that in the use of the machine the rollers operated together by a rolling and slipping action. This machine was used for grinding preparations of India rubber, and mixing it with coloring matter by passing the same through the rollers. The rollers of the other of said machines were made of iron, with smooth surfaces, of equal diameters, and so geared together by a cog-wheel and pivot, that one roller revolved about four times, while the other revolved once, thereby operating together by a rolling and slipping action; this machine, with the iron rollers, was used to spread the India rubber compound on the composition, consisting of the rubber and other ingredients on cloth; by passing the cloth and the rubber to spread on it between the rollers. The rollers of the machine having the wooden rollers were about two and a half feet long, and those of the machine having the iron rollers were about four feet long—the iron rollers were about eight or nine inches in diameter; one of the wooden rollers was about four inches, and the other about sixteen inches in diameter, said machines were used in 1829 openly and not kept as a secret, and were seen by many persons. I then soon after went into other pursuits, and left the said machines with my brother. At first I contemplated applying for a patent for said invention, and for that purpose had specifications and drawings made, and the drawing hereto annexed, with my name written thereon, is a true copy of one caused to be made by me in the year 1829, I still having the original one in my possession—said drawing represents a rolling and slipping action of the roller. I

finally relinquished the idea of applying for a patent previous to that time. I had applied for and obtained a patent for another invention, a true copy of which is hereto annexed, marked Schedule A.

Cross-examined by WM. JUDSON, Esq., Counsel for E. M. CHAFFEE.

Q. What place in Westchester County did you manufacture India rubber?

A. In the town of North Salem.

Q. What solvents did you employ?

A. Common spirits of turpentine, generally. I also employed oil of tar. Alcohol is not a solvent, but I used it sometimes in combination with spirits of turpentine.

Q. Please to state as nearly as you can recollect, what ingredients, and the different ingredients, you employed in the preparations of the India Rubber?

A. I may not be able to recollect all—the principal ones besides those mentioned was asphaltum, gum elemi, the resin called dragon's blood, lampblack, Venetian red, or red ochre, the same thing; I also applied shellac varnish to the surface, to the composition when spread on cloth, but never used it in the composition.

Q. You have spoken in your specifications of the use of resins; what resins did you employ in the compositions?

A. None but those I have mentioned.

Q. For what purpose lampblack was used in the composition?

A. For the color in some cases, and for that only, so far as I used it at all. I used it for no other purpose.

Q. Were all the different ingredients above named used for the same purpose?

A. No, in the use of the resins my object was to cause the composition to dry more perfectly when it was spread, and once I used Venetian Red for some purpose.

Q. Did they answer the purpose, or have that effect?

A. According to my best recollection the Dragon's Blood, Asphaltum and Venetian Red, answered the purpose to a greater or less extent.

Q. Please describe the process employed by you, and all the different processes of preparing India Rubber with other ingredients; and of manufacturing the same?

A. When I operated I commonly used what is called the slab rubber, generally cut up into thin pieces, say two or three inches in length, from one-third to one-fourth thick, and length, width of the slab; after washing and cleaning it, I then subjected it to the action of solvents in sufficient quantity to make it of the consistence of a stiff paste, soft as soft dough. In all cases where I used the resins, I first dissolved them in the solvent used for dissolving or softening the rubber. I never used any other solvents than such as I used to dissolve rubber, I mean for the resins. When I combined dry substances in the form of powder with the rubber, such as lampblack and Venetian red, I mixed them with the paste, as before described, and subjected to the action of the machinery, as described in my direct examination. The rubber and solvents I put together in a vessel, and the paste and dry material I mixed on a board or in a convenient vessel, that is imperfectly, and completed the combination by the action of the machine in grinding them. What I mean by grinding, as stated in my direct, is the sure thorough incorporation of the ingredients, and reducing the paste to a uniform consistence; that was the object and process by the machine, called grinding in the direct testimony.

Q. What was the purpose and effect of combining the different ingredients with the rubber?

A. According to my experience, Rubber, simply dissolved in spirits of tur-

petine after being spread upon cloth, and dried by any process with which I was acquainted at that time, was liable to soften by exposure to the sun in a considerable degree, so as to become worthless. The object of combining the different substances named, as stated before, was to prevent the composition from melting after having been spread and dried; these substances answered that purpose to a greater or less extent. The oil of tar was free from that objection: the rubber, when dissolved in that and spread, would retain its flexibility. I think the greatest part of my difficulty was in using an impure spirits of turpentine, which I think could have been obviated by using camphene. I think I made goods that did not melt by the sun, of asphaltum, and lampblack in the composition; but I did not consider lampblack contributed to that effect. Both machines were operated by water power. We could spread very fast, but our means of drying were such that we could not dispose of any large quantity; we could not hang up more than two or three pieces at a time; we never used any process for drying except to hang the goods up in the shade.

Q. Are you not the oldest manufacturer in this country of India Rubber; and name such persons, if any, as you can recollect, who manufactured India Rubber before you, and who carried it on after you discontinued?

A. Before I had anything to do with it, I heard that Dr. Comstock, of Hartford, had done something at it, and had taken a patent, which I think was by the combining of spirits of turpentine with the rubber, and applying it to cloth, to make it waterproof. I never had any information as to the extent to which he went into the business, or when or how long he carried it on. I never heard of any other person in this country going into it till after I gave it up; I gave it up because I did not succeed in making it profitable—because I became engaged in another pursuit.

Q. Do you think India Rubber can be dissolved in other solvents?

A. I wish to explain now that in all cases where I have spoken of India Rubber being dissolved, it was my intention to be understood that the rubber absorbed the liquid with which it was combined, thereby becoming more or less softened, so as to form a paste, or plastic substance. I believe it may be dissolved by spirits of turpentine to a very limited extent, also in oil of cajeput and other measures.

Q. Should you not think it a very important object to bring rubber into a plastic state without the use of a solvent, if the same could be done; and would not the saving, in point of expense, by dissolving with solvents, be very great?

A. I should say that the importance of such a process would be measured by the costs of the process. So far as the costs are concerned, there are other considerations that might arise, such as: whether one result would be better than the other.

Q. Suppose the product of the two processes to be the same, and costs of the material to be the same, the power the same, and costs of all other materials the same, in a word, all other things being equal except the solvents, should you not think an invention, or discovery, by which the use of all solvents could be dispensed with, a very valuable improvement, or discovery?

A. If you were to ask me whether a discovery, by which all solvents could be saved in the manufacture of India Rubber, without incurring any additional expense otherwise, and producing equally good results, I should consider such a discovery in proportion to the importance of the business, as being very valuable. When I thought of the rolling and slipping motion, I was not aware that that principle had been used before for any purpose. I did not try it to manufacture India Rubber without the use of solvents.

PATENT GRANTED TO JOHN J. HOWE, JANUARY THIRD, 1839.

COPY SPECIFICATION.

THE Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said John J. Howe himself

of his improvement, being a composition of matter to be used as a flexible and elastic water proof and air proof cement, paint or varnish.

To all to whom these presents shall come or may concern, I, John J. Howe, of the City of New York, do hereby specify, in writing, a description of the invention for which I seek letters patent; and also the manner of using, and process of compounding the same, as follows:—

I claim as my invention or discovery, the combination of India rubber, with any of the resins that are soluble in oil of turpentine, or other volatile oil, by means of such of said oils as are known to be capable of dissolving India rubber and the respective resins made use of, so as to form either a paint, varnish, or cement, that will render porous bodies impermeable by either water or air; and the application of said invention in the improvement in the arts of painting, varnishing and cementing. The combination of Caoutchouc, or India rubber, merely with one of turpentine and other volatile oils, has been well known, and forms no part of my discovery, or of my claim. Caoutchouc, as is known to chemists, is soluble in volatile oils; but when they evaporate, they leave it in a glutinous state, and deprived of much of its elasticity. (See Henry's Elements of Chemistry. London: 1818, vol. II., p. 246.) These objections are obviated by my discovery.

Specification 1st.—Dissolve one pound of the said resin or resins, made choice of (for example, dragon's blood, or elemi, or the two combined), in six or eight pints of oil of turpentine, or other volatile oil; and to this solution add one pound of India rubber, cut into small pieces. After standing a few days, the India rubber will have absorbed the solution of the resin in the oil, forming therewith a gelatinous, ductile paste. This composition may be used either without any addition, or in combination with the various bodies known and used as colors or paints in oil painting, whether these be added for the purpose of ornament, or to assist in forming a body. When this is properly applied upon the surface of cloth, paper, leather, or other flexible or porous body, and the oil allowed to evaporate, it forms upon such surface a strong, smooth, flexible, and elastic sheet or coating, which will effectually exclude water and air, and retain its useful properties under any circumstances of exposure to the sun and weather.

In the application of this composition for the purpose of forming water proof and air proof cloth, it may either be put upon the right side, so as to form thereon a water proof and air proof surface, to be used externally; or it may be applied to the wrong side, so as to leave the appearance of the right side unchanged. This composition may also be used as a cement, for forming the articles on which it is applied into various garments, tubes, bags, boxes, vessels, and other utensils, and for uniting thereon surfaces for any purpose whatever. It may also be used for the purpose of cementing the joints of wooden boxes, &c., and rendering them water proof and air proof.

Specification 2d.—The composition may be laid upon the surfaces intended to be covered with it, with a brush or spatula. Several coats are sometimes required to produce a complete covering; and then each successive coat must be allowed to dry before the next is applied. In order to improve the gloss, and remove any adhesiveness which might otherwise remain, the work may be finished by applying a thin coat of shellac, or other spirits of wine varnish.

Specification 3d.—When the composition is to be used as a cement, the surface to be cemented must be sufficiently coated, and the coating be allowed to attain, by drying, such a degree of cohesion as not to come off on the fingers when pressed upon it, at the same time that any two portions of the surface will adhere strongly on being brought into contact. The parts to be cemented are then to be accurately applied together, and moderately pressed; after which, allow the whole to dry, when the attachment will be very strong.

The whole process of preparing, applying, and drying the composition must be conducted in the shade. Such volatile oils will of course be used, as are

known to be capable of dissolving India rubber, and the respective resins made use of.

IN TESTIMONY of the truth and correctness of the above description of said invention or discovery, and of the manner of using, and process of compounding the same, I have hereunto set my hand and seal, this third day of January, in the year of our Lord 1839.

JOHN J. HOWE.

Witnesses, WM. MITCHELL,
EDWD. N. MEAD.

NOTE.—The said colors or paints may be combined with the said composition by any of the methods commonly used in mixing and preparing oil paints. If necessary, the composition may be softened or diluted by adding more of the said volatile oils used in the composition.

PATENT DATED MARCH 19TH, 1850.

The schedules referred to in the Letters Patent and making part of the same.

To all persons to whom these presents shall come:

BE it known that we, Francis D. Hayward, and John C. Bickford, of Colchester, in the County of New London and State of Connecticut, have invented a new and useful process of coating cloth, or various other materials, with caoutchouc, or other substance of similar properties, or which as heretofore applied and fixed to cloth, has been previously entirely or partially dissolved by some solvent, or been attached by some cement, and we do hereby declare that the nature of said process is fully described in the following specification, that is to say:

Our invention or process consists in taking a piece of cloth or any other sheet material, (to whose surface it may be desirable to apply and fix caoutchouc, gum elastic or India rubber,) and a quantity of ground India rubber, (when in a tacky or adhesive state, in which it is after being ground or reduced by the usual process of grinding crude caoutchouc,) and running or passing the same together, (the caoutchouc being on one side of the cloth,) between two cylinders or rollers, (plated with their axes parallel and their curved surfaces in contact or nearly so,) and in such manner that while the upper of said rollers, or that in contact with the caoutchouc is made to revolve at a *greater speed* or velocity than the lower one, it, (the said upper roller; or that in contact with the caoutchouc,) shall spread and grind it, as it were, into the cloth, and below, and fix it to that surface of it which is immediately contiguous to said roller, viz.: that roller which revolves at the greatest speed.

We are aware that by means of two rollers or cylinders, India rubber has been spread upon cloth or other material, and made to adhere to it, by *simple pressure*, the said rollers having been revolved at the same velocity, and they serving only to spread the gum over the surface, and press it down thereupon. In such case, in order to give the rubber the power of adhering to the cloth, it requires first to be dissolved or softened, by spirits of turpentine or some other equivalent solvent. Our process of moving or revolving one of the rollers faster than the other, grinds the rubber into and down upon the cloth, and so thoroughly fixes it thereto, as to render it *impossible to peel it therefrom*, whereas by the old process it can be readily peeled off. Besides this, we are enabled to dispense with the use of spirits of turpentine, or any chemical solvent, such as is generally used to give the rubber the properties required, to cause it to adhere to the cloth. We do not claim the mere spreading of India rubber on cloth by means of rollers, moving at equal velocities, nor do we claim the running of rollers at different velocities, as the same have been operated heretofore, and for the purpose of planishing or polishing a *hard surface*, (such

as that of a plate of metal, or for grinding or reducing any substance run between them, but,

What we do claim is the new or improved process of applying and fixing rubber to cloth, by means of rollers, the said improved process being a combination of the method of spreading the rubber by the pressure of rollers, and the method of grinding and fixing it at the same time against and into the substance of the cloth, all as specified.

In testimony whereof, we have hereto set our signatures, this twenty-ninth day of January, A. D. 1849.

Witnesses:

RALPH GILBERT, }
HENRY C. GILBERT. }

FRANCIS D. HAYWARD, }
JOHN C. BICKFORD. }

THOMAS EWBANK,
Commissioner.

WHEREAS, I, Edwin M. Chaffee, of Providence, in the State of Rhode Island, have discovered and invented certain new and useful improvements in grinding and working India rubber without a solvent, and in the machinery for accomplishing the same, for which letters patent were granted by the United States, dated the 31st day of August, A. D. 1834, to me, the said Chaffee, and which letters patent have been duly and regularly extended to me, by the Commissioner of Patents of the United States, for the term of seven years from the expiration of the original patent.

And whereas, Horace H. Day, of the city and State of New York, is desirous of acquiring said invention and letters patent, and all right and interest in and to the same, for and during the term for which said letters patent were extended, and for and during any additional term for which the same may be extended or re-issued; and all my right, title or interest in, or to any and all damages, which have been committed by any infringement of said letters patent, by any person or persons, and for which a right of action or suit has or shall accrue to me; and all my right, title and interest, in or to any and all contracts, agreements and licenses which have been made with any person or persons, in relation to said patent or invention, or the right to make, use or vend the same, and all power which I possess or have in relation thereto—not hereby intending to acknowledge the validity of any contract made with or by William Judeon, as my attorney.

Now these presents witnesseth, That for and in consideration of the sum of eleven thousand dollars, lawful money of the United States, to me in hand paid by the said Horace H. Day, the receipt of which I do hereby acknowledge, I have assigned, sold and set over, and do hereby assign, sell and set over unto the said Horace H. Day and his executors, administrators and assigns, said invention, and every part thereof, and the said letters patent, for the whole of the term of seven years, for which said letters patent were extended, or for the term for which the same shall hereafter be extended as aforesaid, or reissued, in and for the whole of the United States and Territories, and all my right, title and interest in and to the same and every part thereof; also, all of my right, title and interest and power, in, to and over any and all damages or claim for, or rights to damages, against any and all persons whatsoever, for or by virtue of or of arising from any and all infringements of said letters patent, or for which a right of action or suit has or shall accrue me; also all my right, title and interest in, and power over, any and all contracts, agreements and licenses, if any, which has or have been made with any person or persons, in relation to said letters patent or invention, or to the right to make, use and vend said invention, together with all benefit, profit and advantage which would have accrued to me therefrom, or by virtue thereof, had this assignment and transfer not have

been made. The same to be held and enjoyed by the said Horace H. Day, his executors, administrators and assigns, for his and their own use and behoof, forever, as fully and entirely as the same would or could have been held and enjoyed by me, had this transfer and sale not been made. And for the purpose of the better securing unto the said Horace H. Day the aforesaid rights, powers, interests and advantages, I do hereby irrevocably nominate and appoint said Day my true and lawful attorney in my name, place and stead, and for his own use and benefit, and for the use and behoof of his legal representatives, to sue for and collect and recover, all damages to which I am entitled, and for which I have any legal claim, or to which a right of action has accrued to me for, by virtue of or on account of any and all infringements of said letters patent, and to compromise and settle for the same as, and on such terms as he shall see fit, and in my name to execute and deliver releases and quitclaimances thereof, with or without seal; and in all respects to exercise as full power and control and authority over the same as I could do if personally present, and this assignment had not been made. And also in my name, place and stead, and for his own use and that of his legal representatives, but at his own expense, to enforce and compel by actions, suits or otherwise, the performance and fulfillment of all contracts, agreements and licenses, and to revoke or compel the exercise of all powers which have been made, entered into, given or granted, in relation to said invention or letters patent, or the right to make, use and sell said invention, as fully and completely, to all intents and purposes, as I would do if personally present.

Witness my hand and seal, at Providence, in the State of Rhode Island, the first day July, A. D. 1853.

EDWIN M. CHAFFEE. [SEAL.]

In presence of

T. A. JENCKES,
N. RICHARDSON.

This Indenture witnesseth that Charles Goodyear, for and in consideration of one dollar and of divers other considerations, received by him from William Judson of the city of New York, hath bargained, sold and assigned, and by these presents doth bargain, sell and assign to the said William Judson, his heirs, executors, administrators and assigns, one eighth part of all the right, title and interest of the said Charles Goodyear of, in and to any and all the inventions and patent rights as secured to him by patents and made by or belonging to the said Charles Goodyear, in or about the preparation; manufacture or composition of India Rubber, either in its pure state or in combination with other materials or ingredients, whether said inventions or rights, or any of them, concern the preparation or composition of India Rubber, or machinery for, or modes and arts of manufacturing or preparing India Rubber or substances in which India Rubber is a component part, and also one eighth part of all right and interest of the said Charles Goodyear of, in and to any future improvements or inventions which may be made by him, or in which he may become interested, in the preparation of India Rubber or the manufacture of the same, and of machinery used for and about the preparation and manufacture of the same. It being distinctly understood, however, that the said Charles Goodyear has not conveyed and does not convey by any thing herein contained, to the said William Judson or his representatives any right of sale or disposition of said inventions or patent rights; and it is further distinctly understood, that the said William Judson shall not be entitled to collect or enforce the payment of said interest hereby conveyed until a decision of the court on motion for injunction, or by verdict of a jury, whether favorable to the said Charles Goodyear or otherwise, or by compromise with defendant with consent of the said Charles Goodyear or his attorney.

In witness whereof the parties have herunto set their hands and seals the fourteenth day of August, one thousand eight hundred and forty-six.

Witness, WM. F. ELY.

CHARLES GOODYEAR. [L.S.]
WILLIAM JUDSON. [L.S.]

Received and recorded, 26th October, 1846.

\$750.

PROVIDENCE, October 1st, 1853.

Four months after date pay to the order of myself seven hundred and fifty dollars, value received, and charge the same to account of

EDWIN M. CHAFFEE.

To Messrs. BOWEN & BROWN,
No. Feb., 1854, Providence.

Received of Edwin M. Chaffee seven hundred and fifty dollars in full for my services and expenses as counsel for him in procuring the extension of his patent for improvements in the manufacture of India rubber, which patent was dated August 31, 1836, and extended by the Commissioner of Patents on the 2d of August, 1850—when paid, is to be in full.

SETH P. STAPLES.

NEW YORK, October 8th, 1853.

LICENSE TO NEW ENGLAND CAR-SPRING COMPANY.

WHEREAS, Letters Patent were issued by the United States Government to Edwin M. Chaffee, dated August 31st, 1836, for a new and useful improvement in the application of undissolved caoutchouc to cloths, leather, and other articles, in coloring the same without the aid of a solvent, and in the machinery used in the process.

AND WHEREAS, the said Edwin M. Chaffee procured an extension of said patent for seven years from the expiration thereof: and whereas said Chaffee by an article under hand and seal, and dated the fifth of September, 1850, upon the considerations and for the purposes therein expressed, did nominate, constitute and appoint William Judson of the City of New York, his trustee and attorney, irrevocable to hold said patent, and have the control thereof as therein provided.

NOW THEREFORE, I, the said William Judson, in consideration of twenty thousand dollars to me in hand paid, the receipt whereof is hereby acknowledged, do give and grant to the New England Car Spring Company a full, absolute and exclusive license to use the improvements secured to said Chaffee in and by said patent, and so extended as aforesaid in the manufacture of India Rubber springs for rail road cars, locomotives, and tenders, and for carriages, vehicles, and conveyances of any kind and also a concurrent right to use said improvements in the manufacture of India Rubber Hose.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 20th day of November, 1851.

WILLIAM JUDSON. [L. S.]

Sealed and delivered {
in presence of { BENJ. H. JARVIS.

Received and Recorded Nov. 27th, 1851.

Whereas, letters patent were issued by the United States Government, to Edwin M. Chaffee, dated August 31st, 1836, for a new and useful improvement in the application of undissolved caoutchouc to cloths, leather, and other articles, in coloring the same without the aid of a solvent, and in the machinery used in the process;

And whereas, the said Edwin M. Chaffee procured an extension of said patent for seven years from the expiration thereof;

And whereas, said Chaffee, by an article, under hand and seal, and dated the 5th day of September, 1850, upon the considerations and for the purposes—

therein expressed, did nominate, constitute and appoint William Judson, of the city of New York, his trustee and attorney irrevocable, to hold said patent and have the control thereof as therein provided;

Now, therefore, I, the said William Judson, in consideration of twenty thousand dollars to me in hand paid, the receipt whereof is hereby acknowledged, do give and grant to the New England Car Spring Company, a full, absolute and exclusive license to use the improvements secured to said Chaffee, in and by said patent, and so extended as aforesaid, in the manufacture of India rubber springs for railroad cars, locomotives and tenders, and for carriages, vehicles, and conveyances of any kind, and also a concurrent right to use said improvements in the manufacture of India rubber hose.

In witness whereof, I have hereunto set my hand and seal, this 20th day of November, 1851.

WILLIAM JUDSON, [SEAL.]

*Sealed and delivered
in presence of*

BENJ. H. JARVIS.

PROVIDENCE, July 1st, 1853.

NEW ENGLAND CAR SPRING CO.—

You are hereby notified that William Judson has no authority to act as my attorney, or to give any licenses or agreement for the use of my patent, for improvement in the manufacture of India rubber, originally dated August 31st, 1836, and extended August 31st, 1850, for a further term of seven years—and that I recognize no acts of his as binding on me, and that I am under no obligation to ratify any thing that he has done in my name.

EDWIN M. CHAFFEE.

Original of which the above is a true copy, served at the office of the Company, at 9 58 A. M., by me.

E. L. SIMPSON.

July 18th, 1853.

PROVIDENCE, December 1st, 1852.

\$375 00

At sight pay to my order, three hundred and seventy-five dollars, value received, and place the same to the debt of

EDWIN M. CHAFFEE.

To WILLIAM JUDSON, Esq.,
Franklin Building, New York.

NEW YORK, December 2d, 1852.

To Mr. EDWIN M. CHAFFEE,—

Sir—I this day protested for non-payment, a draft drawn to your order by you, and indorsed by you, on William Judson of this city, for three hundred and seventy-five dollars, dated Providence, December 1st, 1852.

Respectfully yours,

R. CARLTON OVERTON,
Notary Public.

CHAFFEE'S RECEIPT.

NEW YORK, September 19th, 1850.

Received from Leverett Candee, Hiram Hutchinson, Esq., and Ford & Co., each, the sum of three hundred and seventy-five dollars, making eleven

hundred and twenty five dollars, being in advance of an agreement entered into between William Judson and myself, conveying to said Judson, in trust, my extended patent for Rubber machinery.

EDWIN M. CHAFFEE.

Received from L. Candee, three hundred and seventy-five dollars, being the proportion of the Hayward Manufacturing Company, of an advance by the Shoe Associates, of fifteen hundred dollars, on the Patented Machine Extension.

EDWIN M. CHAFFEE.

EXTRACTS FROM 'JOHN HASKINS' TESTIMONY.—CASE OF GOOD-YEAR AND DAY.—READ TO WITNESS.

Q. Whether or not have you any knowledge of the operations of the Roxbury India Rubber Company? if yea, state all you know concerning that company. (Objected to.)

Ans. As the Roxbury India Rubber Company was, I believe, the first that started—in order to give its history as far as I am acquainted with it, it will be necessary to commence with the first experiments of E. M. Chaffee, and follow it up to the time they stopped.

Mr. Chaffee came to work for me in the patent leather business, in the fall of 1828 or spring of 1829. During the winter of 1834 and 1835, he had removed with me to Roxbury from Boston, as a finisher of patent leather. He experimented in his leisure moments with India rubber, by dissolving it with spirits of turpentine. He then discovered that the rubber was very much improved by adding lampblack.

In the spring of 1832, he invented a small machine for coating the cloth, that would spread about ten yards of cloth at a time. After trying the same with great secrecy, he informed me of the facts, or what he was able to do so far.

Soon after that he brought me a roll of about ten yards of the black rubber cloth, coated and dried by the sun, which we considered was a most excellent and valuable article.

Mr. Luke Baldwin, then of Roxbury, agreed with me to take hold of this then new invention. A suitable building was engaged at once, situated on Dudley street, Roxbury, which Mr. Chaffee moved into, with the small spreading machine, &c. This building was then kept secretly fastened, night and day, and no one allowed entrance but Mr. Baldwin, Mr. Chaffee, and myself, and I believe, a brother of Chaffee's.

In the winter of 1831 and 1832, it was determined between us to put the concern into a company; and a few influential citizens of Roxbury were invited to look at the subject, which they did. The stock was taken up at once with a capital of \$30,000—Baldwin, Chaffee, and myself taking stock in the same.

First act of incorporation of Roxbury rubber factory, dated February, 1833.

The capital was afterwards increased to \$240,000, under an additional act in 1834, and again increased to \$300,000 by another act in 1835.

During the years 1833, 1834 and 1835, the Roxbury India Rubber Factory was, to all appearances, going on most prosperously, the stock continually rising. The excitement at length became so great, that several factories were started in Boston, Chelsea, Framingham, Salem, Lynn and other places.

Operatives employed by the Roxbury company, and under bonds not to reveal any of the secrets or arts practised there, were constantly beset at all hours to buy them off, with liberal offers of money and situations, which in some cases was accepted, which led to the more speedy increase of the business in those early days, before the difficulties were understood that afterwards appeared.

During these years I held stock and obligations of stock in the Roxbury India Rubber Company, from 200 to 300 shares, per value \$100 per share.

I believe it to be a well known fact, that the Roxbury company was the first and oldest establishment.

I had heard of a Mr. Cornstock, I think, who saturated cloth with rubber and spirits of turpentine, and which I believe was stiff and worthless.

JOHN HASKINS.

Adjourned until 11 A. M., to-morrow, August 16th, 1851.

August 16th, 1851.

Before Commissioner Munroe.

Direct Examination of John Haskins resumed.

In the year 1835, Mr. Chaffee, after sundry experiments, ventured to inform the directors of the company that he thought he could save them a large portion of the solvent they had been using by the old process, it having cost them somewhere near \$50,000 a year, for the last two years previous to the general crisis. The suggestion was received with great surprise and pleasure by them. Shortly after, the stock rose to nearly double its par value, in consequence of his satisfying them, by experiments and samples, that it could be effected by the building a suitable machine for the purpose. At first he dared not inform them the full extent of his own belief, which was, that it would coat the cloth, roll it up as fast as coated, using no solvent at all, for fear that they would place no confidence in such a statement. He therefore said it would save a large portion of the spirits they were then using.

Without delay, the directors gave instructions to Chaffee to go on and build the necessary machinery with the greatest dispatch and secrecy, which he did; and between one or two years from the time he commenced, the monster machine was brought out with the accompanying grinders; a patent was secured, and when in running order, it fully realized all that was expected of it. But the rubber business was then at so low an ebb after its completion, on account of the difficulties they had encountered, that it was worked occasionally by S. T. Armstrong, then agent of the Roxbury India Rubber Company, in coating cloth for coats, caps, life-preservers, &c., until he left the company's employ, I believe, in 1838, when they were about closing up their affairs. After that, the machine and factory lay idle until the monster was put up at auction, and purchased by myself in the fall of 1843, and the following year sold to Mr. O. Goodyear.

I have before stated that Mr. Goodyear hired the use of this machine, and a portion of the buildings of Armstrong, for experimenting in the fall and winter of 1837 and 1838, and the same machine is now running constantly in the factory at Roxbury, carried on by the Boston Belting Company, and is considered by them the best machine they have—they have built three machines, I believe, since they commenced operations in 1845 and 1846.

Q. Please state the different modes of coating India rubber cloth, that have come under your observation? (Objected to.)

Ans. The way the rubber was at first applied by Chaffee, at Roxbury, was by dissolving it with from three to four quarts of spirits of turpentine, to one pound of rubber, with lamp-black added, sufficient to give it a good black color, which was then flowed upon the cloth extended on wires, in a building long enough to have whole pieces lying one above the other stretched out their whole length. The rubber was flowed on from a box, so arranged that a regular supply passed from the box to the cloth, as it unwound from a roll on to the level wires above named for the same, where it remained for a day or two to evaporate the spirits, which time varied with the weather. This was called the *flowing process*, and was very expensive. This process continued with the Roxbury company until they wound up, before commencing with the monster machine (invented and built by Chaffee) that was building through the greater part of 1835 and 1836. As soon as the monster was completed, about the close

of 1836, I believe, they commenced to work it, realising a great saving over the old *flowing process*, as no solvent was used; but as the rubber business had received so severe a blow from the decomposing of the goods sold and sent to all parts, that the sale of gum elastic goods was much crippled and limited. In the years 1835 and 1836, the Roxbury company had returned to them large quantities of India rubber goods, which, at the invoice prices, amounted to between 20,000 and 30,000 dollars; I have heard it estimated at over the last mentioned sum. These goods were all stuck together, entirely worthless; they were buried in a large pit dug for the purpose somewhere near the factory. They were all manufactured by the *flowing process*.

Soon after this I went with Mr. Goodyear to Woburn, after I had been made acquainted with Hayward's mode of coating with the *knife machine*, the cloth passed over rolls under a knife or straight edge, generally passing round from two to six or eight times, according as it dried, the rubber being placed in front of the knife; this was got up by Nathaniel Hayward, then of Woburn, and took much less solvent than the original flowing process. After the knife machine, I next saw at Hayward's factory a set of camphine calendars, as they were called, for coating cloth with one or two pairs of camphine grinders, which was more expeditious as well as more economical than the knife machine he was before using. The camphine rolls were used by Mr. Goodyear's licensees and others, until after he had purchased the monster in 1844, when similar machines to run without solvent were built, and are now wholly used for most kinds of work.

BENJAMIN H. JARVIS SWORN AND EXAMINED BY MR. BRADY.

A. (Handing witness a paper,) At the time of the date of that instrument, Nov. 13th, 1855, made by Judson to Chaffee, you were in Judson's employment?

A. Yes, sir.

Q. And you was the subscribing witness to this instrument?

A. Yes, sir.

Q. You saw it executed and subscribed your name to it?

A. Yes, sir.

Q. It was sealed at the time?

A. It was.

Q. How long had you known Chaffee before the date of that paper?

A. It may have been a week perhaps.

This witness was not cross-examined.

BENJAMIN H. JARVIS was called and examined by MR. BRADY as follows:

Q. You went to Washington and had this voluminous manuscript prepared?

A. Yes, sir.

Q. Did you bring back this certified record?

A. I did.

Q. Have you a memorandum of the original papers which you examined, with the signatures to them?

A. I have.

Q. At Folio 602 is a protest. Has that Mr. Day's original signature?

A. It has.

Q. Did you see the general remonstrances against this extension?

A. I did.

Q. Did you examine any original papers except those on the memorandum?

A. There is a lot from the department of the Interior which are printed, which, I think, contain among the rest a protest of Mr. Day, having been sent

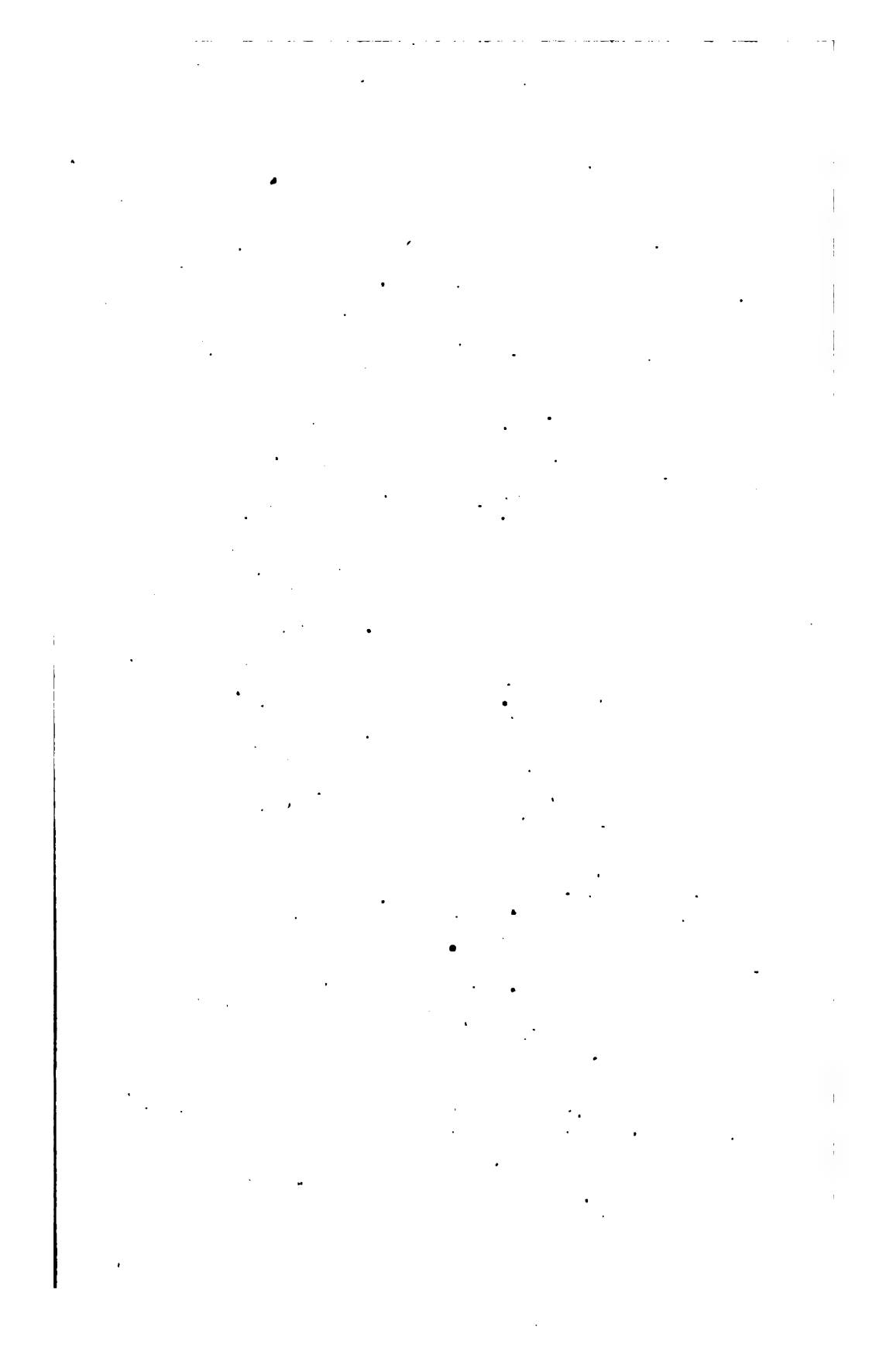
from the Department of the Interior to the Patent Office, and filed with the papers in this case.

Q. You did not examine these papers?

A. No, sir.

Q. Did you examine any papers with Day's signature sent by the Secretary of the Interior?

A. I could not say whether they were sent from the Department of the Interior or not.



APPENDIX.

Containing the Arguments of Counsel, upon questions raised during the progress of the trial.

RULE OF EVIDENCE IN REGARD TO EXPERTS.

At the opening of the Court, on the sixth day—January 30th, (see page 88.)

Mr. BRADLEY said: I wish to call the attention of the Court to a matter in regard to the evidence of Mr. Stone. We wish your honor distinctly to understand, as appeared by the cross-examination yesterday, that we were not aware of his testimony, until a week ago last Monday. It was impossible, therefore, to give the thirty days' notice of any facts in his possession. We do not wish, on account of his testimony, to ask a further postponement of the case, so that we might use his testimony. We concluded, therefore, to waive the benefit of the facts within his knowledge, for the purpose of this trial. But, it seems to me, we have still a right to ask him, or any other person, not the facts within their knowledge, but whether the Chaffee process was an obvious, or a novel process to a person engaged in the manufacture of rubber in 1835 and 1836. We cannot go into the facts, upon the ground that we wished—we, therefore, put the question in this form: In your opinion, as an expert, was the process of grinding rubber by heated cylinders running with an unequal motion, without a solvent, a novel or an obvious process, to a person acquainted with and engaged in the manufacture of India rubber, in this country, in the years 1835 and 1836? We know we have no right to be specific, but we have a right, we think, to his opinion, and we wish to have the benefit of that exception, if your honor rules it out.

Mr. RICHARDSON—I have very little to say in reference to the distinct question, whether this question is proper. The statute provides, that notices shall be given thirty days before the trial, of the place and person by whom used, if the parties seek to establish a want of validity in a patent case—and there is good reason for that law, and why it should be enforced in court. It is a statute, not a rule of the courts—an act of Congress. And I do not wish that any prejudice should arise, either in the court or jury, from the fact that we wish to shut out any evidence in relation to these machines. Neither do I suppose this man knows any thing about a machine in Troy, except one which has been testified to as having been carried to Troy. However that

may be, we simply stand within the notice—I understand the duties of an expert to be distinctly and simply these: First, he may state the fact that there is a machine such as is claimed to be like in principle to the one patented, which is anterior in date to the patented one; second, he may give his opinion, whether the two are alike in principle. You must first have the fact before any comparison can be instituted. The object of the notice required is, that the party setting up a want of validity, shall state where the machinery or process was used, and when they have proved its use, at the time and place specified, they may call an expert to compare it with the original. But, to say to a witness—In your opinion, was this thing novel or patentable?—the result will be this: All the opposite party can be brought here to swear, that they did not think this a novel invention; and we may call witnesses on our side to swear, that they think it was, and the fact must go to the jury, upon the mere opinion of experts, as to whether certain processes are alike. I doubt very much, whether an expert can exist in reference to a process, for this reason: The operation of machinery is a matter of skill; but the combining of substances, which constitutes a process, is a mere fact, not dependent upon the judgment of a man—a man may have tried experiments, and may give the result, but then he is giving the simple facts. He may be skilled in the arts, but still he is giving simple facts. Did your honor ever know an expert testify as such, to any thing else than that he understood, that one machine was like another? Suppose, there is one machine; the witness is asked—Did you ever see the machine? If so, where was it? He answers, that he saw it, but not at the place notified, and he is not allowed to compare it. Then the counsel says—I want to call him as an expert. For what? not to compare it with the machine that existed, but to go around this law—to get the theorizing of this witness, though I cannot prove the existence of the machine with which he compares it.

Mr. BRADLEY—I do not wish to discuss this matter at any length. As we understand, the question of patentability is one of mixed law and fact. Your honor, we suppose, will say to the jury, what are the rules of law, which guides them in deciding whether a given claim is patentable or not. Whether, in point of fact, a particular patent in the case, at bar, is an obvious, or a novel idea, is a question of fact for them to decide. Now, it seems to us, that the jury's judgment, in the weighing of existing facts, could be assisted by the opinion of men versed in that particular branch of business. I admit, we have a strong desire to get all the evidence before the jury, that we possibly can, legally. We have put before this jury, the state of the art at the time of this invention—that we have a clear right to do. Now, having the state of the art before the jury, they are to judge whether this alleged invention, was an obvious or a novel one, so far as to be entitled to a patent. Cannot their decision be aided by the opinion of men perfectly conversant in that particular department of business, at the time of this discovery? Would not that superior knowledge be pertinent evidence to go to the jury, to aid them in deciding whether, in that state of the art, this invention was an obvious thing, or so far a novel and original idea, that the man ought to have a patent for it? Your honor, in deciding this question, decides it once for all, for this and other witnesses.

The COURT—It seems to me, that the duty of an expert, is, not to bring facts into the case, but to compare things that are before the court. I have never known an expert to be used, except to compare two machines. For instance, an expert chemist, may be called upon to testify, as to the composition of matter, but I do not think, that so general a question as that of the general knowledge of any witness, who is an expert, can be put into a case. We must have the facts specifically, so that the court and jury may be able to judge the expert; for, in truth, they have a right to take the opinion of the expert or not, as they think best, as appears proper and right to them. But then all the facts must appear to them, so that they may be enabled to do that. Now, it is true, this man cannot be a witness—because, he has not been properly embraced in the notice. Certainly his knowledge of what facts are in his mind, cannot be introduced in this way, evading the statute. And, so far as he is an expert, he

can only be called upon, of course, to compare in reference to facts, which are already before the court, and he must appear to be an expert before his testimony can be taken. The question is not admitted.

Mr. BRADLEY, took exception.

FOR WHOM DID JUDSON ACT?

John Haskins being on the stand, was asked—Do you know, as a matter of fact, for whom Mr. Judson was acting, and laboring to procure the extension? (page 114.)

The WITNESS was about to tell what he understood from Judeon, when

Mr. RICHARDSON objected to his stating any thing that Judson told him.

Mr. BRADY—I raise the question of law—what Judson said at the time—in reference to the question for whom he was acting, and I claim the right to prove it as part of the *res gesta*. I shall not take much time. It is alleged, on the part of the plaintiff, and was so opened to the jury, that Judson acted in this matter, as the attorney and counsel of Chaffee. Brother Jenckes, in his opening, stated that it could be claimed at some stage of this controversy, in some aspect of it, that Judson took an unfair advantage of his position, as attorney and counsel of Chaffee, to extract from Chaffee some contract, injurious to himself, such as his lawyer had no right to do—that we are fully prepared to meet. I propose to show, by this and other witnesses, that although it is true, that Judson was nominally, and necessarily acting on the record as attorney or counsel of Chaffee, who was a party named in this proceeding, yet he was, in fact, as my associate Bradley opened to the jury, the attorney, counsel, agent and trustee of Goodyear, and his licensees, and acted for them. This date, to which I call the witness's attention, preceded any acquisition of title to Mr. Day, and also preceded the date of extension, which was August 31, 1850. Now, I submit, without much time in discussion, that where it is essential to determine, in any judicial proceeding in what capacity and character an individual acted at a given time, who is a third person to the parties in the suit, his declarations made, accompanying those acts, are part of the *res gesta*, to give quality and character to the transaction, and may be used as evidence. (Reads 1st. Greenleaf, see p. 108.)

Mr. RICHARDSON. I am aware that this doctrine of *res gesta* is somewhat complicated. If, when I go out of this court-house, I should say in what capacity I acted, it would be no evidence; but what I have done in the case would be evidence. They cannot call a witness to swear that Judson told him so and so.

The COURT. Where is Judson himself?

Mr. RICHARDSON. I was about to say that Judge Betts decided that a counsel who acted in that case nominally for Chaffee (Mr. Keller) could not be permitted to come upon the stand and swear that he was not counsel for Chaffee.

Mr. BRADY. If Judson could be produced and examined, would my friend take his testimony as final and conclusive upon the subject? Haven't I a right, in reference to a witness who is appealed in advance, who is charged with flagrant dereliction, to show his declaration?

The COURT. I think myself it is inadmissible on the ground that it is not the way to prove a fact, when it can be proved by better evidence.

Mr. BRADY took exception.

PAPER OF THE FIFTH OF SEPTEMBER.

At the close of the seventh day, Jan. 31, (see page 118,) the paper of Nov. 12, 1851; having been duly put into the case.

Mr. BRADY said: I have now a paper to offer in the case, on which I know some discussion will be had. It is the paper of the 5th of Sept., 1850.

Mr. RICHARDSON. Do you propose to call the subscribing witness?

Mr. BRADY. I propose to read it on the strength of the recitals in the instru-

ment of the 12th of Nov. In the meantime I wish to connect with this paper the counterpart, and we ask the plaintiff to produce it.

The COURT (to plaintiff's counsel.) What is your objection?

MR. RICHARDSON. That they must call the subscribing witness.

The Court here adjourned; and on the following morning

Mr. BRADY asked the plaintiff's counsel for the counterpart.

Mr. RICHARDSON. We will have it here in a moment.

Mr. BRADY. We now offer this paper in evidence. We have shown a notice of revocation of this paper of the 12th of Nov., 1851, and we offered in evidence the papers connected with it, but they were not received. The counterpart is in the possession of our opponents. Chaffee therefore had it; and the presumption is that he received it at the time of the execution of both papers of Sept. 5, 1850, and claimed, under the instrument, his anxiety, as we claim the right to the patent. We have also given in evidence the instrument of Nov. 12, which recites as follows, (reads the recitals.) It appears that it was recorded at the date, and that fact establishes the identity of the paper referred to in this instrument of Nov. We claim on that proof that there is such an admission by the recitals under seal of the execution of that paper of Sept. 5, as estops Chaffee & Day, who claim under it from denying the execution of the first paper, and entitles us to read it in evidence.

Mr. JENCKES. The gentleman in claiming under this patent has stepped from one date prior to the claim of a license to use over to a period beyond the time when he says his title is proved, and has put into the case in evidence a paper executed by William Judson and Edwin M. Chaffee, dated Nov. 12, 1851, in which Judson is prepared to do certain things upon certain conditions, as attorney for Chaffee. That is now the position of their case. That paper contains certain recitals. Upon the strength of the recitals in that instrument, they say they are entitled to read in evidence to the court and jury another paper, bearing date the 5th of Sept., 1850, without any other proof of its existence or execution, coupling at the same time with that offer the fact that a counterpart (which, when produced, will prove not to be a counterpart,) is in existence, and by the permission of Chaffee is in the possession of the plaintiff. That does not at all alter the position of the case at the time of this offer. They do not offer the paper in our possession; they offer the paper in their possession. It says an article of a certain date. The paper is produced, and it appears to be an instrument under seal, with an attesting witness.

(Mr. Jenckes spoke at some length, and submitted authorities, and among others, the decision of Judge Betts on this same question, which arose in New York. The concluding part of his honor's decision, as written out by the reporter while Mr. Jenckes was speaking, is as follows:)

"Then, both in this State Court and in the English Court, it is invariably required, when an instrument is produced, executed under seal, and accompanied by a witness, you shall call the witness, or account for his not being present. I go upon the general law principle, that, as a binding rule of practice, of which I know of no exception, you must, when you offer a deed in evidence, produce the subscribing witness, or excuse his non-production. You can excuse his non-production by showing that he is out of the range of the court, or unable to attend. Various circumstances laid down in the books will relieve a party from the necessity of calling his witness personally. But that matter of excuse must be submitted to the court as a question of law, and the court must pass upon it—whether it is enough to exonerate him from a duty which, as a general practice, the law requires. Without, then, affirming that this party is committed by the recital in the instrument, as not being a deed under which they claim, I take it that this case stands in no respect different from an ordinary one—that where an instrument under seal has been executed, in order to read it in court, the party ought to show an excuse for not calling the subscribing witness. He must call him or excuse himself by some fact which, in the judgment of a court of law, amounts to a relief."

Mr. BRADY. If your honor please, our learned opponents have obviously and properly concluded that, notwithstanding his honor Judge Betts did, at the trial in New York, pass upon this specific question, your honor should be advised of

the authorities on the point, and should give it your original consideration. It certainly is an interesting question of law, and an important one in this case, in our view of it, and a correct decision upon it is what we very much desire. We have our opinion, and it differs from that of our opponents. Your honor after hearing us and our friends will say, what is the law, and I think it will be discovered, upon a very cursory examination of all the points, that Judge Betts committed an error in his ruling, and misunderstood the case of Carver & Jackson, and the other case in the 6th of Peters, to which my opponent has referred. I do not recollect precisely the language which his honor used in giving his opinion as to these particular points, but I am perfectly content to assume that what purports to be an extract from the reporter's notes of that opinion is entirely correct, and I think it is demonstrable that his honor misapplied the case of Carver & Jackson, and did not state correctly what was adjudged there.

It was not necessary for my opponent to go through a number of cases to establish the general proposition, that where there is a subscribing witness to an instrument under seal, or any other, it is generally the absolute duty of a party seeking to put that paper in evidence, to call the attesting witness. That I distinctly admit to be the general rule of evidence, but it is subject to exceptions and qualifications not alluded to by his honor Judge Betts, and not even stated by Greenleaf in his most excellent treatise on evidence. But there are other rules of law on this same question just as general, just as clear, precise and positive as this which I have now admitted to exist, and if one of these other clear and definitely settled propositions of law meets the one presented on the other side, and displaces it, then, of course, although you do not deny to the rule that they claim its full force and efficacy, you permit it to be overcome by one which is, on that particular point, more potent and more conclusive.

In Greenleaf this rule is stated in a manner which we do not feel disposed at all to question, (reads from Greenleaf.) There is a statement of the rule, with what Greenleaf says seems to have been the best reason for maintaining it; and I certainly shall not ask your honor to disturb that as a rule of law, although its reason and propriety have been called in question by very able judges, and amongst other instances, in one of the cases to which your attention has been called by our opponents. There is the rule; the exceptions are stated in subsequent sections of this treatise—such as where an instrument is thirty years old, &c. And then in section 571 this is stated:

“A second exception is allowed where the instrument is produced by the adverse party pursuant to a notice, the party producing it claiming an interest under the instrument. In this case the party producing the instrument is not permitted to call on the other for proof of its execution, for by claiming an interest under the instrument, he has admitted the execution.”

I refer to that to show that this rule of law seeming so imperatively and absolutely to require the production of the subscribing witness, is not, after all, an iron and inflexible determination that never will yield to any of the exigencies of a case or the necessities of justice, but it is, like every other rule of the law, open to exceptions, some of which are stated by the writer of the treatise, and others are found to be adjudicated in the reports to which I shall call your honor's attention in a moment.

“The same principle is applied where both parties claim a similar interest under a deed, in which case the fact may be shown by parole. So where they claim under the same ancestor, his title, being equally presumable to be in the possession of either, may be proved by a copy from the register; but it seems the interest claimed in this case must be of an abiding nature.”

Then he speaks of a third class of cases, where it is impossible to be produced from physical disability. And then again, if the adverse party solemnly agrees to admit the execution, their proof is not necessary. And, again, if the witness being called denies, or does not recollect having signed it, it may be established by other evidence. So that although a great deal has been said about the subscribing witness being necessary, here we find that if he should state that he had lost all recollection of it—nay, more, if he should swear on the stand that

it never was executed in his presence at all, (and, as in one English case, where a witness swore that his name, purporting to be signed to it, was a forgery,) you could go on and prove the execution by other witnesses.

I refer your Honor to another passage in this same book, section 211, under the head of "Admissions."

I will now proceed to the cases which the gentleman has adduced. This is not a matter of mere form. In ordinary cases I would not hesitate to put any subscribing witness on the stand; but the gentleman has thought proper to state to your Honor that there is a supposition on our part that if we cite the ordinary proof (and he has drawn his illustration from the menagerie) there would be a lion in our path. There *would* be some kind of lion in our path, but it is not from any such apprehension as that. There is a subscribing witness whom we claim to be adverse to us in feeling, if not in interest, and we never will put him on the stand unless under the compulsion of the law; because when he has got through, and when he comes to state some facts, we will ask the jury to discredit him. If this law can be enforced as claimed by our opponents, then it results in this strange inconsistency: that we must put on the stand a witness in whom we have no great confidence, and whom we cannot ask the jury implicitly to believe.

In the case referred to, of Henry agt. Wilson, the opinion was delivered by Chief Justice Savage, with whom your honor enjoyed a personal acquaintance—as honest and intelligent a man as ever graced a bench in any country or age. His attention was drawn to the subscribing witness, and he says:

"Any other person to whom the defendant had made the same admission might also subscribe the instrument, and thus the rule be evaded. Such is the necessary conclusion from adherence to a rule which, I confess, always appeared to be an absurdity. But it has been so long adhered to that it can be changed only by legislative enactment."

I do not read that to disturb in the slightest degree the force and effect of the settled rule of law, but to show that a very clear and honest mind has entertained the same view of this matter that we do substantially.

The gentleman referred to a case in Easton, of McCall against Dunning, in which a bond, admitted to be secondary evidence, cannot be admitted without due diligence in showing who the subscribing witness was. That was good law in England; but my friend has lost sight of the fact stated by his honor, Judge Stone, in the case of Carver and Jackson, with a clearness and profundity of knowledge and felicity of expression which always distinguished that eminent judge, that there is a radical difference between the English rule and ours. In England any proof, except that of the subscribing witness, even by recital in the deed, when it was admitted by the Court, was regarded as secondary evidence,—the best not being produced to satisfy the great cardinal, primary rule of law, that the best evidence must always be produced of which the case is susceptible. But we say that Judge Story proves it is primary and original evidence; and there is a radical distinction which will make many of these cases effectual.

But in this book which the gentlemen hand us, in the Note S, where the party has knowledge of the execution by an instrument under his hand and seal, that dispenses with the necessity of calling the subscribing witness. That note refers to a case in the 12th of Modern. (Reads the case, in which a witness to a deed being subpoenaed did not appear, and to prove it the party proved his endorsement three years after, reciting a proviso that if he paid such a sum the deed should be void, and acknowledging that the said sum was not paid.) Now, said the gentlemen, that was after the witness had been subpoenaed and did not appear; and that circumstance is stated—because by the English rule even the deed with the recital is secondary evidence. But it struck the mind of his honor in that case that there could be no better evidence of the execution than the man's acknowledgment under his hand and seal; and we will presently show that what was regarded by the English rule as secondary evidence, is primary.

The opinion of Lord Ellenborough which the gentleman cited, is nothing more

than an approval of the rule which we concede generally exists. And even there it does not follow, he says, that the subscribing witnesses are the best witnesses, for others may know more than they; but inasmuch as they are plighted witnesses their knowledge is essential, and must be forthcoming.

The gentleman also cited the opinion of Chief Justice Kent, in the case of Fox agt. Riell, that where there is a subscribing witness to a bond, proof of confession of the obligor is not sufficient, but the witness must be produced. His honor in that examination mentions a historical fact with which your honor is acquainted, that in those times the names of the witnesses were registered, for as scarcely any one but the clergy could sign their names, it never was deemed necessary to sign them at all. And the judge says that under Henry VI. it was held, that if a deed was acknowledged and enrolled, the party was estopped from pleading *non est factum*.

In the case of Small agt. Stevens the Court of the King's bench went a little further, and acknowledged that it was good evidence of the execution of a deed, and such knowledge estopped the party from relying on the witness. And in a subsequent case the same court determines that an endorsement upon a bond by an obligor, in which he recited a part of the bond, and expressly avowed it to be his deed, was evidence of the execution of the deed.

But upon the argument of this case the counsel referred to a decision where the witness did not appear, in which the court said he had not met a case in which the absence of the witness was not accounted for, which was less solemn in its form than the instance he had alluded to, and he took it for granted there was no such case. There is an opinion of Chancellor Kent in reference to the case of 12th Modern, that where only part of the deed was recited in a subsequent one, that is evidence of the execution of the prior one; and when he speaks of admissions as not sufficient to countervail the rule of law, he says, I know of no case where the admission can be received as a substitute for the witness, if it be inferior in its nature or less solemn in its form than that of the 12th of Modern.

That brings us to one question of fact which our friend very dimly suggested, not, however, from want of capacity to make it clear, as to the identity of the paper produced with that referred to in the instrument of the 12th of Nov., and that makes it proper to fix your honor's attention upon the fact that it is identical. Chaffee on the 5th of Sept., 1850, executed an agreement, which, being produced, is under seal. The counterpart of that paper, executed by Judson, was handed to Chaffee at the same date, and is in possession of the gentlemen, and they say they will produce it in court.

Mr. RICHARDSON. If we have the loan of it from Chaffee we will produce it at any time.

Mr. BRADY. It is immaterial whether you produce it by loan or otherwise; it is here; that is a physical fact, and we will avail ourselves of it. It is evidence that at some time we received from Chaffee a paper under seal with his name executed in the presence of their friend George Woodman, and that Chaffee received from Judson a similar paper.

Mr. RICHARDSON. Not under seal.

Mr. BRADY. I did not say it was. I do not care whether it was or not; it is a counterpart, and fourteen months after that Chaffee executes an instrument under seal again with Judson, in which he says: "Whereas, it was agreed by and between William Judson and Edwin N. Chaffee, by an article under hand and seal, &c." Now it is a presumption of law that when any thing is proved to exist that has any kind of identity about it, it is the only thing of that nature in the world. It is not even presumed in law that two men have the same name; and irrespective of any such rule as that, here is the most conclusive evidence of that paper by its date and by the names of the parties, and in the absence of any proof, I should take it to be so conclusive that the veriest and most carping criticism of our lynx-eyed friend on the other side, who insists upon every objection as small as the point of a cambric needle, would not be able to leave any doubt about it.

The question is, whether this acknowledgment of Chaffee that he did, on

the 5th of Sept., execute an instrument with Jackson which is recorded and is produced in court, is proof of the execution of it. Within the case cited, it certainly would be original and primary evidence, but that the English law made it secondary. The opinion of Chancellor Kent bears directly upon the suggestion of the gentleman, that though subsequently it may be evidence of what is recited, it is not evidence of the fact that the deed was executed.

In the case of Penrose agt. Griffith, 4th of Binney's Penn. Reports, pages 225, 8 and 9, the doctrine of recitals in deeds is stated, as strongly as by my brother Jenckes when he invoked it to sustain some view he had. (Reads the case, in which it is stated that the recital amounts to the confession of the party and of those who stand in his place.) My friend thought that Day did not stand in the same situation in reference to this as Chaffee. Why not? Does not Day derive his title exclusively from Chaffee? Is he any more than the assignee of a chose in action? Has it ever been pretended, or can it be, with any kind of plausibility, much less with any hope of success, that he stands in any better position than Chaffee? Certainly not. He claims from Chaffee, and this matter is to be determined precisely as if Chaffee were here. He is privy to Chaffee in interest, and this we will see from a few passages from Judge Story's opinion.

I now refer your honor to the first part of Cowen & Hill's Notes to Phillips on Evidence, 380. (Reads.) I refer also to the second part of the same Notes.

I call your honor's attention to the well-known case of Bowman & Taylor, 2d Adolphus & Hill's, pages 96 and 8, referred to by our friends in this case, in reference to the question of licenses. (Reads.)

I have examined all the opinions delivered in that case, but they follow the Chief Justice in every respect.

Now I think your honor has presented to his mind two rules of law entirely familiar to your honor, the precise application of which, or either of which, in this case, you are to determine. One is the general rule requiring the subscribing witness to be called to prove the execution; and the other is, that what a party has solemnly admitted by his deed thereafter by a recital, or in any manner more or less specific, absolutely and for ever estops and concludes him and all who claim under or through him, from calling that fact in question anywhere.

Before I refer to the case of Carver & Jackson I will take up this alleged authentic extract from the opinion of his Honor Judge Betts, delivered in New York, in which he has unintentionally reported that case—perhaps because it was not sufficiently presented there. It certainly was not presented with anything like the clearness, nor considered with the reflection due to the gravity of the question. (Reads the reporter's extract from Judge Betts, as follows):—

"It appeared in that case that the lease could not be produced on trial—was nowhere to be found. Then two questions arose: One was, whether they could give secondary evidence of the existence of the lease; next, what character of evidence was required to establish that fact. It was ruled by the Court on trial that the recital in the deed of settlement, of the existence of the lease and release, was evidence to go to the jury of the fact of the existence of the lease. That is as far as the Court went on that occasion. And I think, if the case is studied, it will be found that the exception to the ruling of the Court was to that point specifically, and that was the one taken up to a hearing before the Supreme Court. When the Judge delivered the opinion in the Supreme Court he went a step further, and not only ruled it admissible evidence, and proper to go to the jury, but conclusive evidence in the case; and it was probably the law, but was not called for in the case, and in no respect strengthened the claim of the plaintiff in that case, because by making it evidence, and the jury passing upon the fact that such a release was executed, every thing was established by their verdict which was necessary to confirm the title on the part of Astor."

Now it may be that his honor takes a perfectly correct view of that case; but it strikes me that both the learned Judge and my opponent have fallen

into a great mistake, and I am at a loss to conceive (if this is a correct report, and I am unable from memory to state whether it is or not) how, if he said it was the law. Judge Betts proves that all that search for the instrument was unnecessary, and whether it was lost or found made no kind of difference in reference to the admission of the fact of the recital in the subsequent deed.

Mr. Jenckes has given the history of the case, and it is enough to call your honor's attention to it. (Reads a portion of the case.) Now when his honor, Judge Betts, says the Judge went a step farther, and if he refers to Judge Story, he was well warranted in saying that that was the law; however, he may not be well warranted in saying that it was *obiter dictum*, aside from the questions presented in that case. That it was the law and is the law is evidenced by the fact that no case can be found in this country which calls it in question for an instant, since that case was decided—not a case. It was subsequently re-examined deliberately in the case of Orane and Morris, 6th of Peters, which has been referred to on the other side, and recognized to be the settled law of the land. Now he goes on to state the reasons why this is so. (Reads.) So that my friend was unintentionally led into the error which seemed to exist in Judge Betts' mind, in supposing that this case merely determined that the recital was secondary evidence. All the objections founded upon the nature and sufficiency of the proofs given as to the loss of it were dismissed by Judge Story, who says, all these exceptions are disposed of by a principle which we recognize that supersedes them; and we say it is original evidence on which the text writers make a mistake. (Reads from the 6th of Peters, 611 and 612.)

Now then is there any such distinction maintainable as the very subtle one which our opponents suggest—that although Chaffee's deed of the 12th of November may be evidence of the fact that he did execute the deed of the 5th of September, and may be evidence of so much of it as is recited in the last paper, yet it is not such evidence of its execution as will allow us to read it in a court of justice? Is there any case which states any such distinction as that? What is a subscribing witness put on the stand for? To prove the execution of the paper, so that the court may permit it to be read to the jury. What is the effect of a recital? To acknowledge the execution in a manner so solemn and formal that the party is absolutely estopped by it, and cannot be permitted to gainsay it. And when we give evidence under his hand and seal of the execution, we not only give evidence of its execution, but such evidence as is final, conclusive and absolute against Chaffee and all who claim under him.

This is our view of the matter.* More books might be referred to, and perhaps much better arguments advanced, but it is perhaps the substance of what can be suggested on this side of the case, and we leave it to your honor to decide.

Mr. RICHMOND. I have a few suggestions in answer to the argument on the other side. It seems to me that though there is a good deal of learning, technicality, and seeming conflict thrown around the questions, after all, if we take a broad view of the matter, we shall come out right.

In the first place, I wish to submit whether there is a case shown in the books—and I challenge the production of one either in the United States or England—in which the recitals of a deed or any other instrument have been used to prove the execution of a paper for the purpose of reading the original. The gentlemen have given us pretty thorough practice upon this subject both upon this and the previous trial, and I submit that they have not produced any such case, and if one could be found, I take it for granted that they would do so. There is not a case to be found in which a party came into court with his original paper, with a subscribing witness to it, and was allowed to read that instrument merely by proving a recital in another instrument. Then if your honor should rule to say, that, having the original paper in their possession, and the subscribing witness being at the bar of the court in attendance upon it, they may dispense with calling him, and read the original paper as evidence in the case, your honor would make such a ruling as has never been made by any court where such a state of facts existed. The two cases in the 4th and

6th of Peters had no such question involved in them at all. Taking the strongest view possible of the case that the gentleman wishes, and it can be disposed of in three words. The original paper was not present; the counsel attempted to account for it by showing that it was lost, and then attempted to prove its existence and its contents by secondary evidence. That was in the court below. What did the Supreme Court decide? Judge Betts says they only decided necessarily in the case as it stood, that that was sufficient evidence of its existence and of its contents, and that they did not have to decide, in order to confirm the decision of the court below, that it was a conclusive estoppel. Mr. Brady says the Judge did decide, and properly, upon the merits of the case, that it was conclusive evidence of an estoppel. Of what? Of the existence of a paper to be read, like that upon the counsel's table? or of the fact contained in the recital of the instrument, so as to bind the party by that fact?

Now I will try that law on the gentleman's case. He has read the recitals in the paper of the 12th of November. He says we are just as much privies in estate as in the case cited by Peters, bound in precisely the same way. Then let him have the recitals in the paper of the 12th of November as conclusive estoppels if he pleases. When that question comes up we will discuss it, whether it is an estoppel or not. Then is the time to consider it. But if he relies upon those recitals as conclusive evidence of the making of another paper, he must take that paper. But did Judge Story alter the rules of law and say, had the original papers been present, and the subscribing witnesses in court, he would have first let the party put in the recitals, and then the original paper itself, without calling the subscribing witness? That is a very different thing.

When these cases are cited in the text books, in no single instance are they cited under the head of "attesting witnesses," but of "admissions" by the party in the suit. I am aware that in Cowen & Hill's notes upon evidence, they use the language—"even though the original paper be in court;" but they do not cite any case in which it was offered as evidence and objected to, on the ground of want of proof. The doctrine that must be deduced from that note is this:—Where a party comes in and seeks to rely upon a paper made by the other party, as an estoppel, by which he and his privies in estate are bound, the other party cannot compel him to produce the original of that paper; he may rest upon it without the production of the other, even though it be in court. That is not our case. The offer here is to put in an original paper with the subscribing witness's name, and without calling the witness, and to get it in by means of this estoppel. I defy the gentleman to produce a case where that was permitted to be done. In the case in Peters, the instrument was seventy years old, the subscribing witnesses had all deceased, and the paper was shown to be lost. It was a mere question as to the authority of an admission in a deed binding parties and privies in estate. The law may be well enough, but I do not think it applies to this case even then; because I do not think such a privy exists between Day and these defendants, that they come within that case.

But the gentleman says there is a distinction between this country and England, which was carried out and established by the Supreme Court in those cases. That had never any thing to do with the attesting witness—only with the question of estoppel, and how far privies in estate were bound by admissions of their grantor; and that is the distinction that is always taken in the books, and the only distinction between American and English cases. As an illustration of this, take Greenleaf on Evidence, first vol., and you will find that he names first the general rule. He is now going upon the ground, not that they undertake to prove the admissions of a party by his grantor, but of the attesting witness, and the production of the original paper; and he says there are certain exceptions, among which he does not name any such exception as the one claimed by the gentleman on the other side. So you may take Cowen & Hill's notes, and you will find among the exceptions to that rule no such exception as this; and Greenleaf discusses this very doctrine of estoppel in another place, without any reference to this question. And there is a true dis-

inction taken by Judge Betts in relation to it, and there is nothing in his ruling, I insist, adverse to all the authorities upon the subject.

The gentleman read §11 of Greenleaf. I do not think that all the doctrines laid down either by Greenleaf, nor do I concede that all that is contained in Cowen & Hill, in relation to privies in estate, are good law. What Greenleaf does say is this: (Reads.) The gentleman did not see fit to read that last clause; that might be important. If they should rely upon that admission, and the question should come up as to what weight that had as proof, then it might become necessary to discuss the whole doctrine of privies, and go into close examination of this case in Petera, to see precisely what the law is. But what I say in relation to this paper, is, it is no authority in the case. They do not say they rely upon these admissions. If they do, and say that we are bound, as privies in estate, we will take the case and try it upon that. But they do not claim that. They claim their original paper, and seek to put it in. Then there is no rule in conflict with ours; they simply come back to our rule of law, and must produce the subscribing witness. The case in Modern's reports, comes perhaps nearest to the case they attempt to make out, in which the Court permitted the production of the subscribing witness to be waived; but there is nothing to explain it. Your Honor understands how those cases were reported; a summons was issued, and the witness did not appear. Now, if there was any reason for saying that, the Court meant that such a process had been issued for his attendance, as the law required, but admitted secondary evidence for the purpose of supplying the want of calling the subscribing witness. Hence the authority is in our favor; otherwise a summons was entirely useless, if they admitted that he was there; but here was a deed which dispensed with his being called, then there was no use of the secondary evidence.

The gentleman says there is not much reason in this rule. As it has been adhered to by every court in England and this country, it is unnecessary to talk about the reason of it. He says the Judge in New York did not give us the reason of it. It seems to me that if it was a new question to-day, your Honor would see a great and substantial reason why a man, that the parties selected to be a witness, should be called, because he is the best man to call.

The gentleman says it is no such invariable rule, that exceptions should not be made. Let exceptions be made that are necessary. What is the need of an exception in this case? If witnesses are dead an exception is absolutely necessary; or if they are out of the reach of the process of the court. In this case the witness is in attendance and can be called. The gentleman is very careful to tell your Honor in advance that the witness may disappoint them on the stand. If he does, they can call others to sustain the instrument. When that case arises, it is proper to discuss it. He says the witness is in our interest. We have only the gentleman's word for that. There is no such thing in this case. It may be that the facts that took place when that instrument was subscribed, are in our interest, and that they are very dangerous to the other party, and that they fear their production before this jury; but to throw out any insinuation in relation to the witness, at this early stage, is highly improper, because there is no evidence but that George Woodman stands as indifferent here as any other person, even your Honor himself. If it is proper to make such an insinuation, then it may be equally proper to reply that it may be true that what took place at the time of the execution of this paper, is of that character, that they would like to shield themselves from its exposure, especially from their own witness. But, however that may be, is of no consequence here. No exception of this kind is shown. If they rely upon their recitals, take them for what they are worth, and we will take care of that on both sides. If they rely upon the original instrument, they must show your Honor a case where it has been permitted to be read without calling the witness, no good excuse existing for not calling him.

There has been some analogy on the other side of this question. Suppose Chaffee was the party here, instead of Day, and suppose a bill of discovery had been filed against Chaffee, and he had sworn that he had subscribed to that paper, and that it was executed as it purported to be, and they offered to read

it; we have abundant authority, both in this country and in England, that it could not be read. Is not his answer in equity as solemn a transaction, and entitled to as much credit as his recital in a deed? Mark you, there is no case in which the court has permitted an original instrument to be read on account of the recital of a deed. There are many cases in which a court has refused to permit it to be read, where it was proved that the party to the suit had sworn in Chancery that he did execute it; and the reason was, that if you put it in, the adverse party has a right to know what that instrument is.

Now the rule comes right home. We want George Woodman; we want to know what that transaction was, from the man who was in a position to know, and whom we have a right to have called on the stand for that purpose.

The gentleman says, in relation to the authority of Judge Betts, that it was not well considered, perhaps. I do not know in relation to that; but I know very well that the gentleman tried all his own ingenuity, and all that could be gathered from the other counsel in the case, for seven long days, to get this testimony in under one pretence or another. They tried it step by step, inch by inch, arguing it in different phases as it was presented; and if Judge Betts, after hearing all that discussion, did not give that matter a serious consideration, he was guilty of great dereliction of duty. He decided it in every point of view as it was presented, and said that if they sought to put the original paper into the case, they must produce the subscribing witness, and prove its execution; and I believe such will be the ruling of your Honor.

The Court. Of course I must decide this question without further examination of it. It will not do for the case to stop in order that the Court may consider it. I must say, in regard to the general rule, as laid down in the books, I have little doubt on the question. Where a party seeks to put in an original instrument which has a subscribing witness, he must produce the subscribing witness and prove the instrument. Where he relies upon recitals the case is different. As I understood the case which was referred to in the Supreme Court, Judge Story decided that it was not necessary in that case, to produce the original lease, because the lease was original and conclusive evidence of whatever was recited in it. The question did not come up there, that comes up here. The only case that is cited which would seem to conflict with the rule, is from *Modern*. I do not think that is sufficient authority to overrule the doctrine which is so clearly stated in *Greenleaf* and the other authors. The principle seems to be, the right of the party who has executed the instrument, to have the subscribing witness called, in order to state the facts which took place at the time when it was executed; and if that is the principle, I do not see what right I have to say that Chaffee, or those claiming under him, have no right to demand this witness. He seems to be a witness called upon by both parties, and as such must be produced.

Mr. BRADY excepted to the ruling.

In the course of the examination of Mr. Judson, on the twelfth day, Feb. 7, (see page 171) he was handed the counterpart of the paper of the fifth of Sept., and asked if it was his handwriting.

Mr. RICHARDSON objected.

Mr. BRADY. The object is to show that that paper is in his handwriting.

Mr. RICHARDSON. If they wish to put the paper in, they must call the subscribing witness.

Mr. BRADY. I mean that George Woodman shall be called; I said that to the Court on the last day that we were convened here. I mean that the law shall call him, to satisfy the requirements of the law. When the Court has made a decision, and I have said that I will act under it I mean to do it.

Mr. RICHARDSON. And I do not mean you shall get in that paper without calling him.

Mr. BRADY. I have not offered this paper in evidence; and when I do, it is

quite time enough for the gentleman to object. He objects to proving that a certain paper is in this witness's handwriting, and if your honor allows us to prove that fact, it is admissible, without calling the subscribing witness or any body else. This is the counterpart, signed by Judson, alone—when I called upon an adverse party to produce this paper, and he produces it at my call, that dispenses with the necessity of proving its execution. My friend says it is not so. I have not got through stating the proposition. Suppose this paper be one through which, or by virtue of which, both parties to the controversy claim advantage, or title. Now they deny that they do. But if your honor please, suppose it should be held ultimately as matter of law, that Day did not derive any title to this extended patent, by the transfer of July 1, 1858; but only was substituted in the place of Chaffee, for such rights and interests as existed in Chaffee; then Mr. Day would claim this annuity, that is reserved in this paper, would he not? Undoubtedly he would, and could not be deprived of it by any act of Chaffee. But I suggest that merely as a reason for the use I am subsequently to make of this paper. I do not offer it now, but simply ask this witness, if that is his handwriting. That I understand is objected to.

Mr. RICHARDSON—No, sir.

The Court—But that does not allow it to go in.

Mr. RICHARDSON—I know; but it is perfectly immaterial, except for the purpose of putting it in.

The Court—Better let him put it in.

Mr. RICHARDSON—I object to the gentleman's attempting to go round this decision. The rule of law is, if we have a paper under which we claim title, and the other party claim title (that is, upon the issues on trial) and we produce it, upon their call as a title, under which we claim, they need not prove it—and there is a reason for that law. Now, though we might on some subsequent proceeding, claim title under that paper, the question now is, whether upon this trial we claim title under it. We claim none; we deny the paper as fraudulent. They say, we produced it—we borrowed from Chaffee, we admit, a paper which purports to be a counterpart to some other paper, and we produce it in court; but it does not entitle them to put the paper in that way. And, it is immaterial to ask the witness, whether he wrote the paper, unless they want to read it to the jury.

Mr. BRADY—The gentleman must not say, that we offer this testimony for the purpose of getting round the decision of the court. He has the physical capacity to say that. But, I say to your honor, that Woodman is to be called as a witness, and there is no such intent, nor attempt as to circumvent the decision of the court. That would be disrespectful, and unworthy of the gentlemen who conduct this cause, on the part of the defendants. It could not be done. Woodman is to be called, I repeat, to satisfy what your honor has declared to be the requirements of the law; but, I suppose, I have a right to make a legal point in the case, and give such proof about this paper as would entitle me to offer it in evidence, and then take your honor's ruling, whether I could read it or not. And for that purpose, I simply ask, whose handwriting this is. If the gentleman says, I cannot read it in evidence, because I have not called the subscribing witness, then your honor will rule upon it; but whether your honor shall rule it in or not, Woodman will be called. That is all I have to say about it.

Mr. RICHARDSON—I have a word in reply. It is, undoubtedly, always best for counsel, and for the trial of a cause, that the court adhere strictly to the law. If this simple question, as to handwriting, is only material for evidence, and is objected to, it must be ruled upon. But, the court can readily see, that there may be other motives for this proceeding. Woodman is not now called, and the paper of the 5th of September is not offered. Judson is put upon the stand, and if this question is put to him, it may embarrass the parties in reference to the cross-examination. If the question is perfectly immaterial, except for the purpose of proving the paper, then it should be ruled upon by the court distinctly, so as not to embarrass the counsel, with the mode of cross-examining the witness.

The Court—My opinion is, that the question ought not to be put—that Judson cannot be introduced in any way, for the purpose of proving that paper. And I am, also of opinion, that its being called for by the defendants, and produced by the plaintiff, does not admit it, because the plaintiff does not claim under it.

Mr. BRADY, took exception.

BY WHOM WERE THE EXPENSES OF THE EXTENSION PAID PRIMARILY?

Mr. Judson being on the stand (see page 171,) was asked—By whom were the expenses of obtaining the extension paid primarily?

Mr. RICHARDSON—Stop a moment; I am not quite sure as to whether this question is material. It is put with a view, I suppose, of showing that the expenses of the extension were paid out of the fund of the Goodyear licensees. Now, the defendants have put in the paper of the 12th of November—and, in the progress of the trial, they say, that they claim under the paper of the 5th of September, amended by that of the 12th of November—but, they withhold the paper of the 5th of September, from the case. In the paper of the 12th of November, there are no recitals in reference to the payment of the expenses, to show by whom, or for whom they were paid. Now the question is, whether the defendants must not take the history of the payment of the expenses for the paper of the 5th of September, under which they claim, and not attempt to contradict the recitals in that paper by this witness. That question must come up whenever the paper of the 5th of September gets into the case, and I submit that they cannot withhold that paper, and then undertake to prove by parole, how these expenses are paid. It is a grave question of law, that will have to be submitted to your honor's ruling, when that paper comes in, how far they can give parole evidence in reference to the recitals of that paper, about the payment of these expenses. The defendants claim under three papers—they put in the first and last, and leave out the middle one, which is necessary to make out their title. Now, until the paper of the 5th of September is in the case, it is perfectly immaterial who paid the expenses, and we have a right to object on that ground, and when that paper is put in we claim that it will exclude this testimony.

Mr. BRADY—Your honor will remember, that when we proposed to give in evidence, our book of accounts, in which are contained entries of payments on account of this trust fund, towards procuring this extension, the objection that was then taken, your honor overruled, declaring that it was an important fact in this case, to ascertain how these expenses were paid, and to what fund they were charged—and it was for that purpose alone, that the book was ruled in.

Mr. RICHARDSON—I understood it differently.

Mr. BRADY—Your honor will understand how he ruled.

The Court—I think it was allowed as part of the transactions of the time, and the mode in which the fund was accounted for.

Mr. BRADY—Your honor, against one of the objections of the gentlemen, ruled, that proof might be given of what occurred in 1849, by way of conference and consultation among the licensees of Goodyear, Judson and Staples, as to the expediency and propriety of obtaining the extension; and, also, as to what expenses were incurred, and to what fund they were charged; and we are following up that proof. Now, the objection of the gentleman is entirely new to me, and that is, that the fact which I propose to prove by this witness is relevant, and may bear upon this controversy, but that it is not placed in the order of time that he would like to have it before the court, to enable him to make another objection to our proof. I am not obliged to accommodate the gentleman, and there is no rule of law which compels me to follow the order he prescribes. And, in the course of his statements, the gentleman says, that we claim title under the agreement of the 12th of November. That is not a state-

ment of our case at all. We have proved an agreement of the 28d of May, between Chaffee and Goodyear. That we say, was obtained by Goodyear for the benefit of himself and his licensees, and that the licensees after consultation among themselves with counsel, determined that they would procure that extension; and having determined that the general management was confided to Judson, and the expenses paid out of their funds primarily. If we put in the paper of the 5th of September, then there is a second paper connected with our title, and under that we claim that the title to this patent passed to Judson as trustee for Goodyear and his licensees, the parties interested in his patent. The paper of the 12th of November is put in, and if the law declares that that assists the title or right of the defendants as against Chaffee, or any person claiming under him; then, of course, we are entitled to the benefit and advantage of it, in an action on the case in which various defences are admissible, exclusive of strict proof of paper titles. But that paper of the 12th of November will be found relevant, as bearing upon other questions in this case, such as the ratification of the paper of the 5th of September, and the extent to which it could be affected. But to say, that that paper is put forward and claimed under by us as creating a title in these defendants, or licensees of Goodyear, is not stating the proposition, as we shall contend for it at the close of this case. This much is certain, that if that paper turns out to have been executed without the knowledge or consent of the licensees, we shall claim that it could not impair or affect their rights. But suppose, the first and second papers were in, and the gentleman should object to the proof I am taking—there is no aspect of the case in which that could be decided. Your honor has decided, that proof might be given by whom the expenses of the extension were paid; and out of what fund. If it were a legal obligation for these licensees to contribute to the payment of the expenses, they have done so—Buckingham has testified as to that—and the result is, if the paper of the 12th of November, should be regarded by your honor as tending to give a title to these defendants, as licensees, providing they had contributed towards the payment of these expenses, then we are offering testimony to show that they had, and this is one fact in that question of performance.

Mr. RICHARDSON—It is said that the court has already admitted the testimony of the book of accounts in relation to Chaffee. Upon that point I did not take the objection that I now take at all, neither was it taken or ruled upon by the court. The reason we did not take the objection we take now, may be perfectly immaterial, because though the court has admitted, upon our objection, for one cause, a certain class of testimony, if another objection is taken to the same class, which is a good objection, the court will rule it out, and even go back and rule it out in the other case. But, I did suppose, in another view, this being the act of Chaffee at that early time, that these books might be material, but not upon the ground upon which I take the objection here. Suppose, says the gentleman, that the paper of the 5th of September, was in—then, upon that point, they offer to show, that prior to the execution of that paper, somebody paid the expenses. Now, I say, it is perfectly clear law, that both they and we are for ever estopped from going back of that paper, to show any thing about the payment of the expenses, except what appears upon the face of it. The recitals in that contract, are an estoppel upon both the parties, and when that paper is in. I have authorities as clear as day, that I wish to submit upon the question, and all one way. What they may be permitted to show, as having transpired after the execution of this paper, is another thing.

The gentleman says, he does not claim under the last paper, of November 12th. I do not care whether he does or not, for the purposes of this argument; he claims under the paper of the 5th of September, and is going to put it in, and that recites all about the payment of the expenses. Now I do not wish to discuss the admissibility of that, because I wish the court to see the authorities, and I think the question is important, and should be ruled upon; but I do wish the court to decide that, until they put in the paper of the 5th of September this evidence is not material.

Mr. BRADY. Allow me to call attention to the decision of his honor, Judge Pitman. (Reads from last line of page 22 to last paragraph of page 23.) I read this in order that the gentlemen may have the full benefit of the doubts which your honor expressed upon that point.

Now I propose to show by Judson as matter of fact, that the expenses of this proceeding had all been reimbursed to him before the execution of the agreement of Nov. 12; and I apprehend that when it is insisted in a court of law or equity that money must be paid as a prerequisite to a man's right, which is impossible, in its own nature, to be done, the law will not regard that. If there was any thing to be paid to Judson of the expenses at that time, then they could not avail themselves of any such condition. All that your honor determined was, that on this plea as it stood there was neither an averment of the performance of its condition, nor of any other fact which would enable your honor to say that Chaffee had no interest in the performance of that condition; but if we show that it was a condition which, in its own terms, was impossible of performance, I suppose that will remove any such difficulty. How this case will stand on the facts and evidence is entirely a different question from how it stood on the pleadings with no facts presented to the mind of the court. But all we are upon now is this: I want to show as matter of fact who paid the expenses of this extension proceeding—out of what fund were they paid, giving substantially the same kind of proof which arose from the book; but then the question as to whether the defendants contributed towards it or not will be another question, not dependent at all upon the testimony of Judson.

Mr. RICHARDSON. I have read the decision of your honor a great many times, and certainly there is not a word in it but that we are willing to abide by in the trial of this cause. But that is not the question here. The gentleman says he is now going to perform the conditions. He has got no conditions at all. He says your honor rules that there are certain conditions precedent, and if they had been performed there would have been a good defence. He admits they have not put them into performance. The difficulty is this: He does not undertake to show what has been done since making this contract, but who originally paid these expenses, and out of what fund they were paid. He does not offer to show that Judson in his own right paid them, but that as trustee and agent for Goodyear and the licensees he paid them out of their money. Now the question that I propose to raise when the paper is in, is not whether the payment subsequent by Judson under the terms of that paper is competent, but whether they can undertake to contradict the paper itself, or to prove a condition precedent before any condition precedent is put in the case.

The COURT. I am disposed to say that although I have admitted like testimony, the objection has not been made before. I consider that it is immaterial who paid these expenses until some evidence is given to show its materiality, which must, of course, as we all know, come in under the other paper. Until that paper therefore is put in, I refuse to allow this testimony to come in, in order that the plaintiff may make the distinct objection he intimates; and argue it.

DEFENDANT'S ANSWER.

On the fifteenth day, Feb. 10, (see page 208,) Mr. Jenckes offered in evidence the answer of the defendants to this suit.

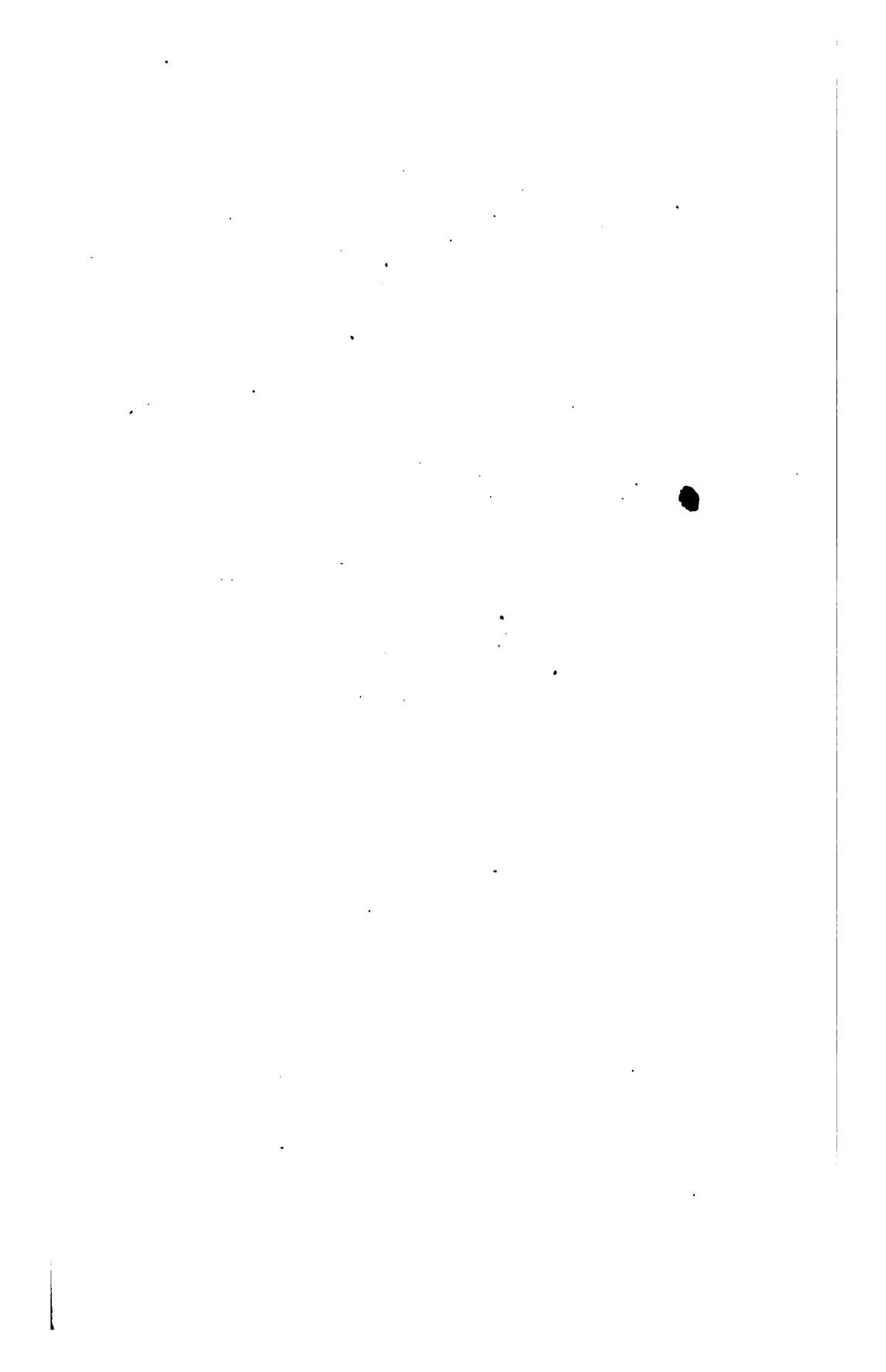
Mr. BRADLEY. I do not know but what we ought to take objection to their submitting a portion of the answer which your honor has allowed us to amend by substituting something else in its place. At all events, if that is admitted it carries with it the amended answer as well.

Mr. JENCKES. It carries the answer on that subject.

Mr. BRADLEY. No sir, not at law. Though we waived our defence in that first answer we were allowed afterwards to take that defence, and have so taken.

The COURT ruled that it was right that the answer should be put in, but







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